



CLEARTONE CM5000

FEATURE USER GUIDE



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NOTE

For technical support on this product call the helpdesk on 0044 1256 484433 during normal office hours.

NOTE

In case of a defect device please contact your local dealer.

General Information

Safety Information

- This terminal meets the applicable safety standards if used as prescribed. All operating and safety instructions are to be followed carefully.



CAUTION

Before using this product, read the operating instructions for safe usage contained in the Product Safety and RF Exposure booklet (Motorola Publication part number 6866537D37 for Europe, Middle East and Africa) enclosed with your terminal.

- Motorola recommends the usage of Motorola approved accessories only.
- Only specialized workshops should be contacted for installation, maintenance and repair work.
- Keep this **User Guide** and the **Product Safety and RF Exposure booklet** in a safe place and make it available to other operators, and in case, that the terminal is passed on to other people.

Copyright Information

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Product Specific Information

- Max RF Power 5 Watts
- Max. Speaker Load 10 Watts at 4 Ohms
- Antenna Impedance 50 Ohms
- Ambient Temperature Range - 40 °C to + 80 °C



WARNING

*If the terminal is in service the surface temperature can rise up to 70 °C.
Do not touch the hot surface*

- Operating Time Continuous / Intermittent

NOTE

In general, the terminal transmit and receive time (operating cycle time) is determined by the communication system. On overload, respectively on extensive use beyond the systems specifications at high ambient temperatures, the terminal is protected by its thermal control, which cuts down the RF output power, thus reducing the terminal coverage range.

Getting Started

This manual contains everything you need to know about how to operate your CM5000 Repeater. If you have any questions regarding the operation and care of this mobile device please contact your local dealer.



You can display different languages on your mobile, for more information please refer to the relevant section in this handbook.

How to Use this Guide

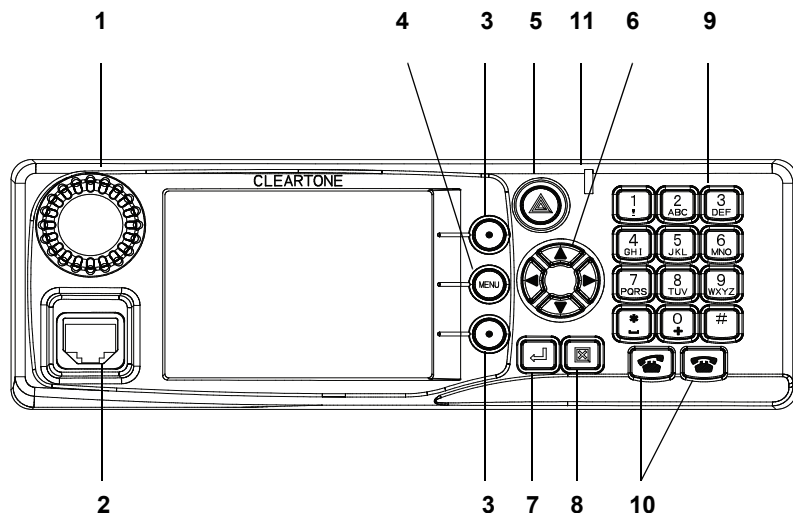
This guide describes the CM5000 features that are set up and pre-programmed at the factory.

Your Service Provider or your organisation may have customised your CM5000 to optimise its use for your individual needs. Check with your Service Provider or organisation to find out the differences from this guide.

Throughout the text in this publication, you will notice the following special notations used to highlight certain information or items:

Example	Description
 or Select	Key presses are shown as a key symbol or in bold print for soft key functions.
More... > Networks > TXI Mode > Activate	Indicates navigation in menu items.
Contacts	Highlighted text indicates the selection.
 On	Indicates the active setting.
Status Delivered	Information appearing on the CM5000 display is shown in special print.
<User Defined>	Indicates a prompt or message configured by your Service Provider.
NOTE	A Note contains additional information which is relevant to the item feature.

Controls and Indicators



Item	Description
1	Rotary Knob Pressing turns the radio ON/OFF Adjust the volume level
2	Microphone Connector Provides connection for a fist microphone
3	Soft Key(s) Press to select the option that is shown on the display
4	Menu Button Used to enter the main menu.

Item	Description
5	Emergency Key Used to send Emergency Alarms.
6	Navigation Keys Press up, down, left or right for scrolling or text editing.
7	Enter Key Used to select the required item.
8	Clear Key Used to clear character or back to the previous screen.
9	Alphanumeric Keypad Used to enter alphanumeric characters for dialling, address book entries and text messages.
10	On Hook/Off Hook Key Used to initiate or answer calls, end calls or send status and text messages.
11	LED Indicator

Powering On/Off

To power on:

- Press and hold **Rotary Knob**.
- If the CM5000 is configured with ignition sense, the radio will automatically turn on whenever the vehicle ignition is turned on.

Your CM5000 performs a self-check and registration routine. After successful registration, the CM5000 will be in service. The display shows Idle screen.

To power off:

- Press and hold **Rotary Knob**.

You will see the **Powering Off** message.

Powering On (Emergency Button)

Press and hold the **Emergency** button to power on.

The CM5000 will power **On** in Emergency Operation or in standard mode (as programmed).

NOTE

The terminal powers On and Off without visible and audible notification if Silent Emergency Mode is activated.

NOTE

It is not recommended to use Silent Emergency with a SIM PIN protected radio as there is no indication to the user when the PIN number is required.

Powering On with Transmit Inhibit (TXI) Active

Transmit Inhibit is a feature allowing you to switch off transmission before entering a Radio-Frequency (RF) sensitive area. To activate this feature, press the **Menu** button and select **More > Networks > TXI Mode > Activate**.



WARNING

*Pressing the Emergency button, even if Transmit Inhibit is activated, causes the CM5000 to transmit immediately. The CM5000 must **NOT** be within the RF sensitive area when entering Emergency Operation.*

Press the **Yes** key to deactivate the TXI Mode. If the CM5000 was previously used in Trunked Mode, it will register to the network. If the CM5000 was previously used in Direct Mode, it will remain in Direct Mode.

Press **No** in Trunked Mode and the CM5000 powers down. Press **No** in Direct Mode and you remain in Direct Mode with TXI selected.

If the CM5000 has a SIM card which is PIN protected, you need to enter the valid PIN or power on the terminal, after exiting TXI mode.

Powering On with SIM Card Authentication

The SIM card stores the keys for End-to-End Encryption.

1. Press and hold the **Rotary Knob** to power on.
2. **Ignore** or **Update** the End-to-End Encryption keys when prompted for **New Key?**.
3. In the Home display the End-to-End Encryption icon appears.

Powering On with SIM Card PIN Protected

When your SIM card is PIN protected, additionally you need to enter the valid PIN on the terminal powering on.

You cannot operate the terminal until entering the correct PIN. If you do fail to enter the correct PIN for the third time, PUK code is required to unblock the SIM card.

NOTE

It is not recommended to use Silent Emergency with a SIM PIN protected radio as there is no indication to the user when the PIN number is required.

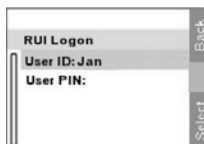
NOTE

If your terminal is using SIM card PIN Protected, the PIN Protect feature is disabled.

Powering On with RUA/RUI Authentication

Radio User Assignment (RUA) & Radio User Identity (RUI) is providing logon authentication service. It gives flexibility to the user to have the same possibilities with any radio as with a personal issued radio. To use full access to the system user needs to provide the login with the PIN number.

RUI Logon is complete



RUI Logon is incomplete



Unlocking the CM5000

Your CM5000 may be locked at power up.

To unlock the CM5000 after powering on, enter the code at the prompt. The CM5000 enters the default Home display.

The unlock code is originally set to 0000. Your Service Provider may change this number before you receive your terminal.

Selecting Your Network

Before you start operating your CM5000, you can select the network you want your CM5000 to be registered to. For detailed information, see “Networks” on page 75.

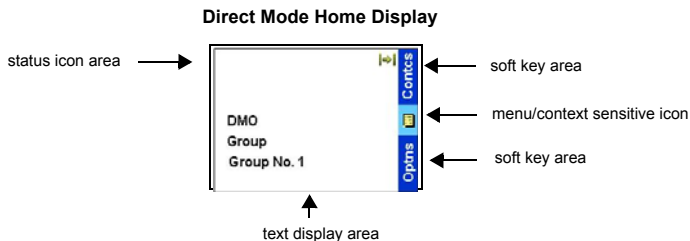
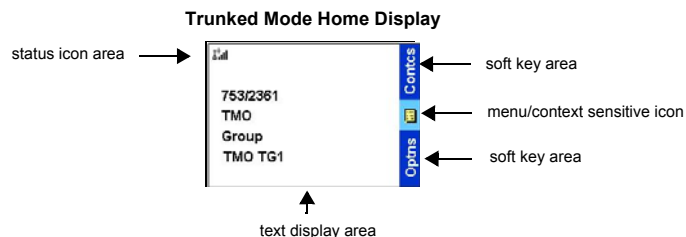
Looking After Your CM5000

To clean your CM5000, use a moistened or antistatic cloth. DO NOT use a dry or electrostatically charged cloth.

The Display



Home (Idle) Display












A powered-on, idle terminal shows the following typical Home display:





Screen Icons

Status icons appear when your phone is engaged in certain activities or when you have activated certain features.

Icon	Description
 	<p>Signal Strength</p> <p>Indicates the signal strength in the current TMO or DMO area. Four bars indicate the best strength. Fewer bars indicate lower signal strength. You may be able to improve signal strength by moving your vehicle to a different location.</p> <p>When your terminal enters Local Site Trunking, a special tone is played, a message is displayed and the In Service icon antenna turns orange.</p>

Icon	Description
	New Message Has Arrived Indicates a new message just arrived. It disappears on changing the display.
	New Message(s) in Inbox Indication of unread message in stack. It disappears when new message has been read.
	All Tones Off No alert tones will be heard. The screen will display incoming calls.
	No Speaker Indicates no speaker output.
	GPS Indicates that the CM5000 is receiving GPS signals. It will disappear when no GPS signal is being received.
	End-to-End Encryption When solid, indicates the End-to-End Encryption is enabled. When blinking, indicates the End-to-End Encryption has been disabled.
	Data Connected Indicates the terminal is in Packet Data Mode. It will disappear when not in Packet Data Mode.
	Emergency Indicate of Emergency state. It will disappear when not in emergency state.
	List Scrolling Displayed to indicate that the Rotary knob use is list scrolling, as long as this use is selected.
	Scan Indication that the CM5000 is in Group scan mode. It will disappear when in single group mode.
	Direct Mode (DMO) Indicates that the CM5000 is in Direct Mode.

Icon	Description
	Gateway Mode Indicates in-service state for Gateway Mode. Indicates CM5000 fixed communication through Gateway.
	Repeater Mode Indicates in-service state for Repeater Mode. Indicates CM5000 fixed communication through Repeater.


The LED Status Indicator

The LED indicator shows the in-service states of your CM5000. Please refer to the table below.

Indicator	Status
Solid GREEN	In use
Blinking GREEN	In service
Solid RED	Out of service / Disabled
Blinking RED	Connecting to a network
Solid ORANGE	Transmission Inhibit (TXI) in service Channel Busy (in DMO)
Blinking ORANGE	Incoming call

Key, Rotary Knob, and Button Overview

Soft Keys


Press upper or lower  to select the option that appears in the screen directly next to the upper or lower soft key.

In this example, **Contcs** is displayed next to the key. Pressing  enters the contact list. In the user guide, this action is described as “press **Contcs**”.



Menu Button

Press the **Menu** button to enter:

- **The menu (when there is no on-going activity).** The CM5000 menus allow you to control your CM5000 settings. Menus are organised in a hierarchy. See “List of Menu Items” on page 53. The menu options provide access to a further list of options called a sub-menu.
- The **context sensitive menu** (when  icon is on) to view a list of items for the current menu.

Rotary Knob

The rotary knob is used for powering on and off the CM5000, as a volume control and to switch the operating mode (Group Call, Individual Call, Phone Call). Push it down and hold to turn the device on/off. Turn clockwise to increase the audio volume level and to scroll through menus. Press once then rotate to change operating mode.

Emergency Button

Press and hold this button to enter Emergency Operation.

When the CM5000 is powered down, press and hold this button to power **On** in Emergency Operation (if configured by your Service Provider). See “Emergency Operation” on page 41.

NOTE

It is not recommended to use Silent Emergency with a SIM PIN protected radio as there is no indication to the user when the PIN number is required.

Aliases (Names)

Aliases are optional names that you can assign to stored phone and private numbers (or IDs). To edit an alias, see page 55.

Aliases can be up to 12 characters in length and may consist of letters, numbers, and spaces.

Screen Saver

If your Service Provider configured this feature, the screen saver will automatically cover the CM5000 display after the CM5000 stays idle for a pre-programmed period of time. If you press a key or a call arrives, the screen saver is deactivated and the CM5000 resumes standard operation.

The screen saver consists of a logo and an alphanumeric text. Check in the menu options whether the Service Provider has given you the capability of entering your own screen saver text (see page 65).

Terminal Disable/Enable

Your CM5000 is provided with a feature that allows your Service Provider to disable it temporarily in case it is stolen. When your CM5000 is disabled, no calls can be initiated or received. While your CM5000 is disabled, it will look and act like it is turned Off. If you try to turn your CM5000 On, when it is disabled, it will operate as described above. If your CM5000 is found, your Service Provider can re-enable it. After your CM5000 is re-enabled, you may resume normal operation.

Terminal Permanent Disable

Your CM5000 is provided with a feature that allows your Service Provider to disable it permanently in case it is stolen or lost. When your CM5000 is disabled permanently, it becomes inoperable.

After a Permanent Disable the CM5000 can not be re-enabled by your Service Provider.

You are recommended to disable your CM5000 permanently only when you do not expect the terminal to be recoverable any more.

Selecting TMO or DMO Operation

General

In Trunked Mode Operation (TMO) the CM5000 is used with the infrastructure services within system coverage.

In Direct Mode Operation (DMO) the CM5000 is used without infrastructure services required.

NOTE

While operating in DMO the propagation travels directly from the transmitting terminal antenna to the receiving terminal antenna, with no assistance from any base station or tower. Therefore, the range is critically dependent on the position of the user and the antenna. To achieve best results, hold the terminal in the hand as high as comfortably possible, and be sure not to obstruct the antenna in any way. Be sure that the antenna is clear from the body, cables, or other obstructions. As there is no tower-mounted base station to assist, and the two users are usually standing at ground level, the range is usually shorter than that can be achieved towards a tower or hilltop. Any obstructions (hills, buildings, etc.) between the users will further decrease the range. Conversely, raising the terminal higher or moving to a higher location may improve the range.

A CM5000 in DMO can communicate with the trunked system (and vice-versa) through a gateway device. To use that feature, please enable the gateway option in your CM5000 (see CommType“Gateway/Repeater Selection” on page 28).

NOTE

In DMO it is only possible to place Group Calls, Emergency Group Calls and Private Simplex Calls.

Entering TMO or DMO

Enter TMO or DMO in one of the following ways:

- From the Home display press **Optns** and select **Direct Mode** if the CM5000 is in TMO.
- From the Home display press **Optns** and select **Trunked Mode** if the CM5000 is in DMO.

- Press the **Menu** button and select **More... > Networks > Trunked Mode** if the CM5000 is in DMO.
- Press the **Menu** button and select **More... > Networks > Direct Mode** if the CM5000 is in TMO.

NOTE

Your terminal can alert you of an incoming call. Select the alert settings in the Tones menu items.

TMO Calls

You can make and receive the following types of calls when the CM5000 operates in Trunked Mode:

- Group Calls
- Private Calls
- Phone Calls
- PABX Calls – local (office) extension calls
- Emergency Calls

DMO Calls

You can make and receive Group and Private Calls when the CM5000 operates in Direct Mode (DMO). This includes Emergency Group Calls.

The CM5000 returns to the Home display when there is no activity for a few seconds.

Selecting Gateway or Repeater Mode Operation

General

NOTE

The terminal can operate in only one of the following modes at a time: Trunked Mode Operation, Direct Mode Operation, Gateway Mode Operation, Repeater Mode Operation. For security and operational reasons combining these modes is not possible.

In Gateway Mode Operation communication relay between TMO and DMO is available. DMO terminals communicate with the trunked system (and vice-versa).

In Repeater Mode Operation the CM5000 re-transmits information received from one DMO terminal to other DMO terminal enhancing coverage area.

Entering Gateway Mode

NOTE

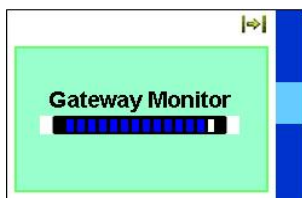
When the radio is in Gateway Mode, the radio will work only as a gateway radio. It cannot work as a standard TMO/DMO radio (the user cannot press PTT button, cannot hear the communication voice, etc.).

When your CM5000 is in TMO enter Gateway Mode in one of the following ways:

- From the Home display press **Optns** and select **Gateway Mode**.
- Press the **Menu** button and select **More... > Networks > Gateway Mode**.

The display shows Gateway Monitor. In Gateway Monitor Mode CM5000 checks if the communication goes through other gateway or not.

- When it does not pick up other gateway communication, it switches to Gateway Mode.
- When it detects other gateway communication during Gateway Monitor mode. The display shows **Gateway Detected** message. The radio is in Temporary DMO.



It checks other gateway communication all the time. If other gateway communication disappears, CM5000 returns to Gateway Monitor Mode. Press **Exit** in Temporary DMO to switch to DMO.

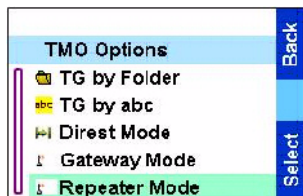
Entering Repeater Mode

NOTE

When the radio is in Repeater Mode, the radio will work only as a gateway radio. It cannot work as a standard TMO/DMO radio (the user cannot press PTT button, cannot hear the communication voice, etc.).

When your CM5000 is in TMO enter Repeater Mode in one of the following ways:

- From the Home display press **Optns** and select **Repeater Mode** as required.
- Press the **Menu** button and select **More... > Networks > Repeater Mode**.



Making Calls

See the relevant sections in the user guide.

Receiving Calls

The CM5000 will automatically receive the incoming call. Additionally, if Inactivity Revert Mode is enabled, the CM5000 returns automatically to the Home display, after that call ends.

NOTE

Inactivity Revert Mode will occur if configured by your Service Provider.

Your CM5000 will alert you of an incoming call depending on the setting you selected in the Tones menu option (see page 63).

During message editing, you will be alerted of an incoming Group/Emergency/Broadcast Group Call if configured by your Service Provider.

Packet Data

The Packet Data (PD) Service allows you to transfer data in a TETRA system using the Internet Protocol (IP). Check with your Service Provider for the availability of this feature.


NOTE

For transferring data from a standard computer over the air connect the computer via the Active Data Cable GMKN1022 with your CM5000. Your Service Provider has to setup additional applications on your computer.

Enabling Pin Activated Features


To activate optional features (for example: GPS, Gateway, Repeater, Multi-Slot Packet Data) use the PIN codes that were supplied with the radio.

To enable features:

1. Turn off radio.
2. Turn on the radio by pressing and holding On Hook button, Up Arrow button and  simultaneously.
3. Select the feature from the list and enter feature PIN code at the "Input Code" screen. Press OK.

NOTE

You can repeat step 4 to select more than one feature. When "Service Restricted" screen is displayed after selecting a feature, please check programming parameters using the Native Programmer.

4. Turn off radio by pressing .

Error Message Screen

Radio will display error message screen when it detects an error.

Error Message	Description
Encryption Key Error	When SCK key(s) have been lost or not programmed and encryption is enabled, this message is displayed. Under this condition, it is not possible to use the radio: i.e. the menu access, entering the "Optional Features Menu" or any other radio functions.
Security (K) Error	When authentication key (K) has been lost or not programmed and the radio is programmed to use authentication, this message is displayed. Under this condition, it is not possible to use the radio: i.e. the menu access, entering the "Optional Features Menu" or any other radio functions.
Insert SIM	When no SIM card is installed and SIM-based end-to-end encryption is being used, this message is displayed. Under this condition, it is not possible to use the radio, i.e. the menu access, or any other radio functions except entering the "Optional Features Menu" (optional Features Menu can still be accessed.).

Trunked Mode Operation - TMO

General

A Group Call is an instant communication between you and others in a talkgroup that you select. Participants may join (late entry) and leave an on-going Group Call. A talkgroup is a pre-defined set of subscribers enabled to participate in and/or invoke a Group Call, that is set up by your Service Provider.

Talkgroups appear on your display as names or numbers (for example: Sales, Service, Electricians, Talkgrp10).

Talkgroups are divided into **folders**. Each folder may contain several talkgroups.

For ease of use, your CM5000 also provides the ability to:

- Perform an alphabetical search of the talkgroup aliases. Scroll through the entire talkgroup list.
- Organise your favourite groups into one folder called My Groups (set up by your Service Provider).

Your talkgroups may be organized into **scan lists** (set up by your Service Provider, or by yourself through the Menu).

When you activate one of these scan lists, your CM5000 will continuously monitor the activities of the selected talkgroups.

By assigning priorities to the talkgroups defined in the **scan list**, you will be capable of accepting calls that have higher priority than the on-going call.

You can start talkgroup, folder, or scanning selection when the terminal is idle or receiving a call.

When receiving a call, choose one of the following:

- Exit selection screen to join the call.
- Join the call from the selection screen by pressing **PTT**.
- Continue selection.

Selecting a Group

You can select a talkgroup in one of the following ways, by using the:

- folder search.
- alphabetical search feature.
- index.

Using Folder Search

From the Home display, press **Optns**. Select a group by folder search ("**TG by Folder**"). Select the folder and select the group.



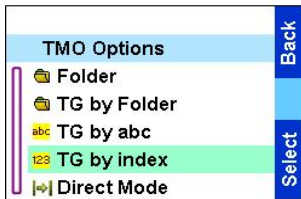
Using Alphabetic Search

From the Home display, press **Optns**. Select a group by alphabetic search ("**TG by abc**"). Enter the first character of the group's name. Select the group.



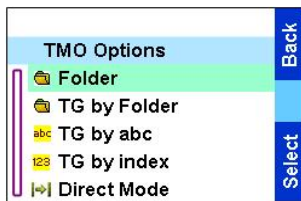
Using Index

From the Home display, press **Optns**. Select a group by folder search ("**TG by Index**"). Select the folder and select the group.



Selecting a Folder

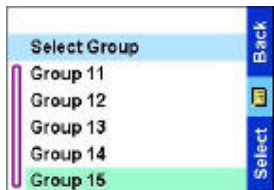
From the Home display, press **Optns**. Select **Folder**, and select the desired folder. The display shows the last selected group in that folder.



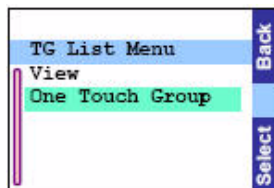
Changing One Touch Group (OTG) Assignment

To change your OTG assignment, you need to:

1. Go to the list of the talkgroups.
2. Select a group and press **Menu** button.



3. In the **TG List Menu** screen, select **One Touch Group** and press **Select**.



“My Groups” Folder

You can organise your favourite groups into one folder called “My Groups”.

Adding/Deleting Groups from My Groups

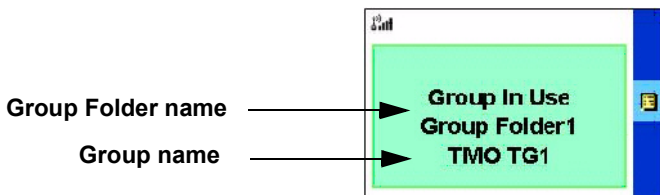
For more information, see “My Groups” on page 71.

Activating/deactivating Scanning

See “Group Scan” on page 69.

Making a Group Call

1. From the Home display and if this is the required group, press and hold the **PTT**.
2. Wait for the talk permit tone (if configured) and then speak into the microphone. Release the **PTT** button to listen.



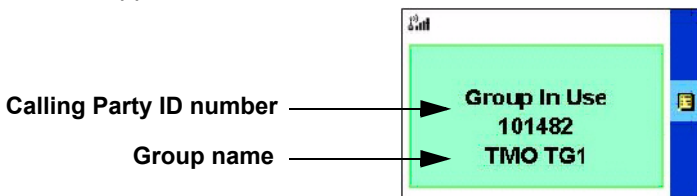
When you start a call, all members of the selected group who have their units turned on, will receive the Group Call.

NOTE

The "No Group" message is displayed when you are out of the normal coverage area of your selected group. You must then select a new group that is valid for your working location.

Receiving Group Call

When an Group call is received the mobile will automatically go into group mode and receive the call, also the group caller name will appear in the screen.



Transmit Inhibit

You can activate the Transmit Inhibit (TXI) Mode before entering RF sensitive areas, e.g. in hospitals or in potentially explosive areas, where safety can be jeopardized due to CM5000 transmission radiation.

NOTE

Radiation of the CM5000 is only suppressed if the TXI Mode is activated or the CM5000 is separated from power supply.

In TXI Mode the CM5000 will not transmit under any circumstances, except for the Emergency Call, which can be initiated even if the CM5000 is in TXI Mode.

All CM5000 functions and keys which cause transmission, e.g. registration to the network, change of talkgroup or folder, sending messages, pressing **PTT**, etc. are disabled.

When no danger to safety exists anymore (for instance if you leave the RF sensitive area), the TXI Mode can be deactivated and the CM5000 returns to standard operation.

Dynamic Group Number Assignment (DGNA)

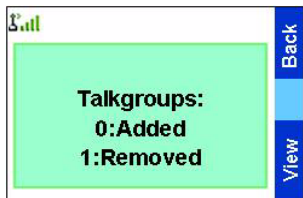
DGNA provides the ability for a network operator or authorised user to dynamically allocate new, or update existing talkgroups to selected terminals over the air interface. Those talkgroups may be added to the existing folder, or to a designated DGNA folder, or to the next available folder space, depending on your Service Provider setting.

Using supplementary services messages (SS-DGNA), the network operator can command your terminal to add talkgroups or to update the existing talkgroups, or to delete talkgroups from the list. This operation is performed by transmitting the data into your CM5000.

NOTE

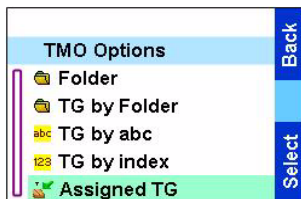
Your Service Provider can gather some Talkgroups under one Super-group and transmit it to your CM5000 as a DGNA. In such a case, you will be able to participate in calls to/from all the groups in the Super-group.

The terminal works in one of the following DGNA modes, Auto-Select DGNA and Non Auto-Select DGNA function. The Auto-Select DGNA does not provide with any attachment/detachment indications. The Non Auto-Select DGNA attaches and detaches explicitly the DGNA group showing respective confirmation displays. If you press Back, the terminal returns to the previous screen.

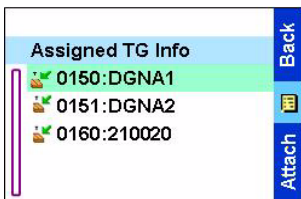


Selecting Assigned Talkgroup

1. From the Home display, press **Optns**. Select **Assigned TG**, and select the desired Assigned Talkgroup. The display shows the Assigned Talkgroups list.

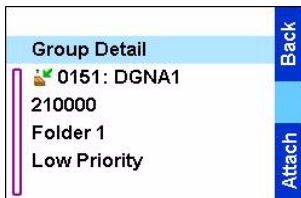


2. Press **Attach**. The terminal attaches to the Assigned Talkgroup and returns to the Home display.



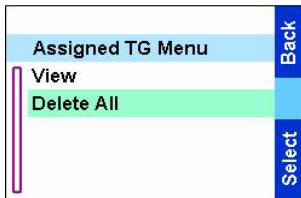
Viewing Assigned Talkgroup

From the Assigned Talkgroups list display, highlight the relevant talkgroup, press **Menu** button, and select **View**. The display shows the Assigned Talkgroup details.



Deleting Assigned Talkgroups

From the Assigned Talkgroups list display, press **Menu** button and select **Delete All**. The terminal will ask for the deletion confirmation.



Direct Mode Operation - DMO

DMO Group Call

In DMO, the CM5000 can be used without your Service Provider's infrastructure. Direct Mode (DMO) allows communication with other terminals also operating in Direct Mode, which are on the same frequency and talkgroup as your CM5000.

You can receive a call:

- From the selected talkgroup
- From other users within talkback range (if configured by your Service Provider). This is called an InterMNI (Mobile Network identity) call.
- From an open group. (An open group is a super-group to which all DMO groups belong.)

When you start a call, the members of the selected talkgroup who have their units turned on, and are within the group subscriber identity (as configured by the Service Provider), will receive the transmission.

If Transmit Inhibit is activated while the terminal is set to DMO, the PTT is disabled. You can only listen. For detailed information on Transmit Inhibit, see page 24. DMO Talkgroup selection is allowed when Transmit Inhibit is activated.

“My Groups” Folder

You can organise your favourite groups into one folder called “My Groups”.

Adding/Deleting Groups from the My Groups Folder

For more information, see “My Groups” on page 71.

Selecting a Group

See “Selecting a Group” on page 22.

Selecting a Folder

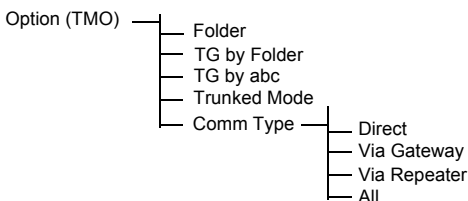
See “Selecting a Folder” on page 22.

Gateway/Repeater Selection

Use the DMO **Config** sub-menu for setting the Gateway and Repeater options.

1. Press **Optns** to enter the options menu in DMO.

DMO Options sub-menu



2. Scroll to **Comm Type**, and press **Select**.

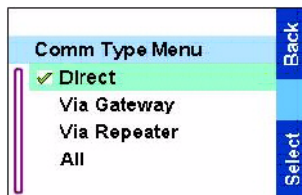


Selecting DMO Group Call MS to MS

To change from gateway or repeater mode to MS - MS mode (DMO terminal to terminal call):

1. Press **Optns**, scroll to **Comm Type** and press **Select**.
2. Scroll to **Direct** and press **Select**.

Your CM5000 communicates directly among DMO terminals.



Selecting DMO Group Call via Gateway

While in DMO, proceed as follows to choose a gateway to set up a call via Gateway for the selected talkgroup:

1. Press **Optns**, scroll to **Comm Type** and press **Select**.
2. Scroll to **Via Gateway** and press **Select**.

Your CM5000 communicates through Gateway only.

Selecting DMO Group Call via Repeater

While in DMO, proceed as follows to choose the Repeater option to set up a call via Repeater for the selected talkgroup:

1. Press **Optns**, scroll to **Comm Type** and press **Select**.
2. Scroll to **Via Repeater** and press **Select**.

Your CM5000 communicates through Repeater only.

Selecting DMO Group Call via Gateway and Repeater

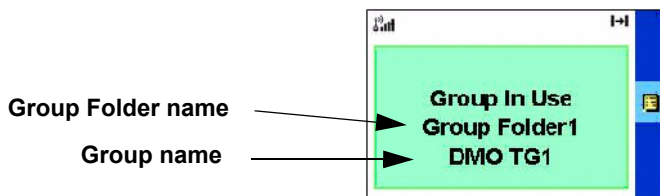
While in DMO, proceed as follows to choose the Gateway and Repeater option to set up a call via Gateway or Repeater for the selected talkgroup.

1. Press **Optns**, scroll to **Comm Type** and press **Select**.
2. Scroll to **All** and press **Select**.

The CM5000 automatically adjusts communication type to a mode depending on a Gateway or Repeater signal presence. If no signal presence is detected, the terminal switches to MS - MS communication.

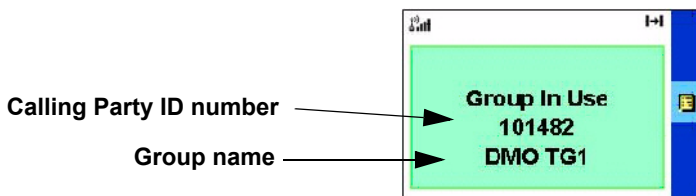
Making Group Call

Select the group from Talkgroup list you require. Press **PTT** button and wait for the grant tone before speaking into the microphone remembering to release the **PTT** to listen.



Receiving Group Call

When an Group call is received the mobile will automatically go into group mode and receive the call, also the group caller name will appear in the screen.



TETRA/UHF Analogue Gateway Mode

General

The CM5000 allows you to establish gateway connection between the TETRA network and a UHF analogue system.

NOTE

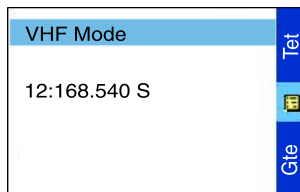
To notify TETRA users of an unencrypted user on the network (while TETRA/UHF analogue gateway mode is active), an audible warning tone is sent every time the analogue unit transmits to the TETRA network.

Entering TETRA/UHF Analogue Gateway Mode

You can enter the analogue/digital gateway mode in DMO. Before entering choose the required DMO group.

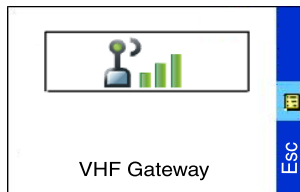
To enter the analogue/digital gateway mode:

1. From the Home display press **Menu** button and then **#** key.
The display shows the current UHF channel selected on UHF mobile.
2. Select the required UHF channel using up/down navigation keys.
3. Select **Gte** to enter the analogue/digital gateway operation
Select **Tet** to return to DMO mode.



Exiting TETRA/UHF Analogue Gateway Operation

To exit the analogue/digital gateway mode, from the VHF Gateway display select **Esc**.



Private Call

General

A Private Call, also called Point-to-Point or individual call, is a call between two individuals. No other terminal can hear the conversation.

NOTE

If your Service Provider has restricted access to the Contacts list, it might not be possible to create a new contact, edit existing contacts or dial up a number which is not in the Contacts list.

For operating the CM5000 in RF sensitive areas, see “Transmit Inhibit” on page 24.

NOTE

While Transmit Inhibit is activated, an incoming Private Call is indicated, but it is not possible to answer the call.

Making Private Call

1. From the Home display select Private Mode using right/left navigation keys.
2. When in Private Mode, dial a number.
3. To initiate a Private Call:
 - in Simplex mode – press and hold the **PTT** button. Wait for the talk permit tone (if configured) before talking, and release the **PTT** when listening.
 - in Duplex mode – press the **On Hook**.

4. To end the call press **On Hook** key.



Called ID Number



Private In Use:
Call set-up procedure is completed
Terminal is in Traffic mode

Encryption Disabled



Called ID Number



Private In Use:
Call set-up procedure is completed
Terminal is in Traffic mode

Encryption Enabled

Making Private Pre-emption Interconnect Call

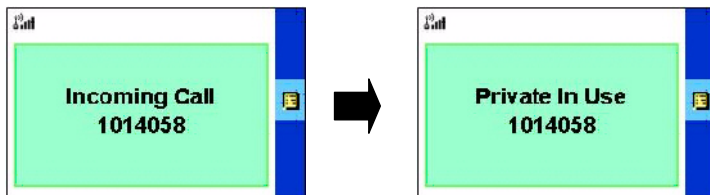
If a placed private call cannot be initiated as the receiving terminal is busy you can change the call priority.

When the receiving terminal is busy the display shows **Busy Interrupt?** prompt. Select **Yes** to change the call priority and to initiate the call again.

When the re-initiated call is connected, the display shows the traffic information.

Receiving Private Call

1. The CM5000 switches to the incoming Private Call. The display shows incoming call notification and the caller's identity.
2. To answer an incoming call, press **PTT**.
3. To reject or end the call, press **On Hook** key.



Phone and PABX Calls

General

The **Phone Call** allows you to call a landline telephone number or a cellular mobile phone number. The **Private Automatic Branch Exchange (PABX) Call** allows you to call local office extension numbers (if programmed by your service provider). This type of call needs to be activated by your Service Provider.

In this publication we use “phone number” when referring to these numbers.

Both calls have the same dialing features.

For operating the CM5000 in RF sensitive areas, see “Transmit Inhibit” on page 24.

NOTE

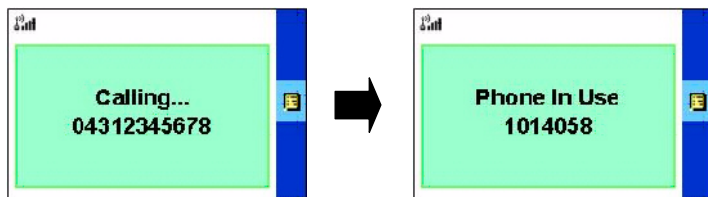
While Transmit Inhibit is activated, an incoming Phone or PABX Call is indicated, but it is not possible to answer the call.

NOTE

If your Service Provider has restricted access to the Contacts list, it might not be possible to create a new contact, edit existing contacts or dial up a number which is not in the Contacts list.

Making a Phone or PABX Call

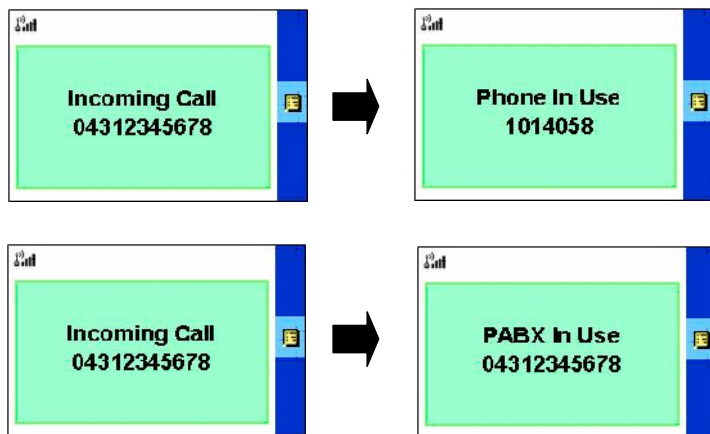
1. From the Home display select Phone or PABX Mode using right/left navigation keys.
2. When in Phone or PABX, select a pre-programmed number from the contact book or dial a number.
3. Press and release **Off Hook** key. You will hear a ringing tone. Wait for the called person to answer your call.



4. To end the call, press **On Hook** key.

Answering a Phone or PABX Call

1. The CM5000 switches to the incoming Phone/PABX Call and starts ringing.
2. To answer the incoming call, press **Off Hook** key.
3. To reject or end the call, press **On Hook** key.



Speed Dial

The Speed Dial function is available in TMO to make a phone call or PABX call. A Speed Dial number can be assigned to a contact.

To use Speed Dial, input the Speed Dial number to the idle display and press #.

Phone call or PABX call is started when the Off Hook key is pressed.

One-Touch Dial

One-Touch Dial function is available when "One Touch Button" function is disabled. ("One-Touch Dial" function or "One Touch Button" functions are mutually exclusive and not available at same time).

Speed dial number from **1** to **9** can be used for the "One-Touch Dial" function.

To use One-Tuch Dial, press the assigned key for more than one second to start a phone or PABX call.

NOTE

After pressing the assigned key, Input Dial screen will be displayed. Do not release the pressed key until the call is initiated.

Emergency Operation

General

Emergency Operation is available in TMO and in DMO, if the CM5000 is in service.

Emergency Mode indication (alert tones) can be disabled by your Service Provider.

NOTE

Pressing the Emergency button even if Transmit Inhibit is activated causes immediately the CM5000 to transmit. When entering Emergency Operation the CM5000 should not be within the RF sensitive area any longer!

Entering Emergency Mode

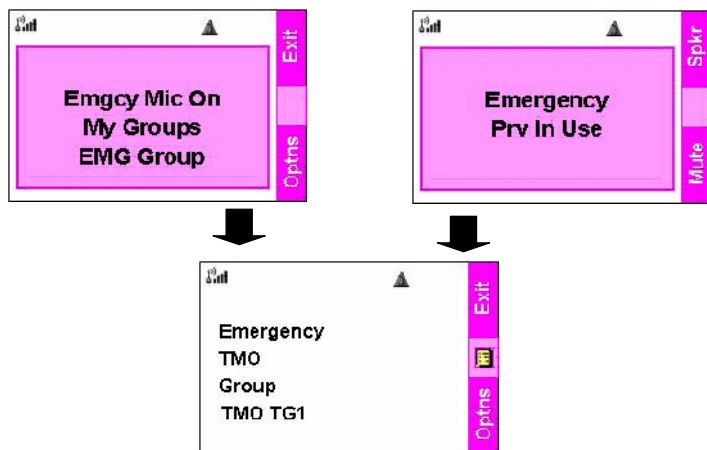
The terminal will enter **Emergency Mode** when you press and hold the Emergency button.

The Emergency Mode allows you to use the **PTT** to transmit with Emergency priority (by either initiating an Emergency Group Call or requesting emergency transmit priority).

After entering Emergency Mode, your CM5000 automatically sends an Emergency Call to predefined address and activate Hot Microphone (if configured).

Hot Mic (Hot Microphone) allows you to talk without pressing the **PTT**. Pressing **PTT** during Hot Mic ends Hot Mic transmission. If Hot Mic is disabled, then use **PTT** to talk.

Each time you press the Emergency button, the terminal will send an Emergency Call with Hot Mic emergency function again.



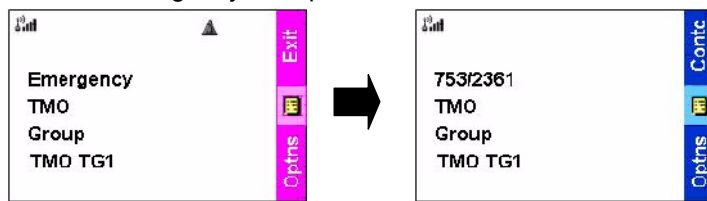
Upon entry into Emergency Mode any existing call or service other than packet data service will be aborted or cleared down.

In Emergency Mode, the terminal will automatically reject Phone, PABX and Private Calls, and will not monitor the groups in the user selected scan list.

Exiting Emergency Mode

The terminal exits Emergency Mode and switches to the Home display:

- If you press and hold the **Exit** soft key during an Emergency Group Call.



- If the infrastructure ends the Emergency Group Call.

Receiving Emergency Call

When the CM5000 receives Emergency Call, the display will show **Emgcy In Use** and switches to Emergency Mode automatically.



Receiving Emergency Call During Private Call

When the CM5000 receives Emergency Call and a Private Call is currently ongoing, the display will show **Emgcy In Use** and enables to choose whether to **Join** or **End** the Emergency Call.



If you stay in the Private Call, the terminal automatically joins the Emergency Call when the Private Call has finished and the Emergency Call is still ongoing.

GPS Location Service

Your terminal's GPS Location feature uses information from Global Positioning System (GPS) satellites orbiting the earth to determine the approximate geographical location of your terminal. The availability and accuracy of this location information (and the amount of time that it takes to calculate it) will vary depending on the environment in which you are using the terminal.

For example, GPS location fixes are often difficult to obtain indoors, in covered locations, between high buildings, or in other situations where you have not established a clear broad view of the sky.

See: **IMPORTANT – Things to Keep in Mind.**

The GPS location Service can assist your Dispatcher or Colleagues in many ways such as more efficient deployment of resources or locating your terminal if you trigger your emergency service.

The terminal can be configured to display location information on the terminal's display or to send it over the air to your dispatcher where it can be displayed in control center (Please check with your Service Provider on the configuration of your terminal).

IMPORTANT – Things to Keep in Mind

Where adequate signals from multiple satellites are not available (usually because your GPS antenna cannot establish a view of a wide area of open sky), the GPS feature of your terminal **WILL NOT WORK**. Such situations include but are not limited to:

- In underground locations
- Inside of tunnels or parking garages
- Under any other metal or concrete roof or structure
- Near a powerful radio or television tower

- When your GPS antenna is covered (for example, by your hand or other object) or facing the ground
- In temperature extremes outside the operating limits of your terminal

Even where location information can be calculated in such situations, it may take longer to do so. Therefore, in any emergency situation, always report your location to your dispatcher.

Furthermore, please note that even where adequate signals from multiple satellites are available, your GPS feature will only provide an approximate location, often within 20 - 100 meters from your actual location.

Enhancing GPS Performance

Sometimes the GPS feature of your terminal may be unable to complete a location calculation successfully. You will then see a message indicating that your terminal cannot see enough visible satellites.

To maximize the ability of your terminal to determine a location fix please note the following guidelines:

- The GPS feature works best where there is nothing between the GPS antenna and a large amount of open sky. If possible, move your vehicle away from tall buildings and foliage. While performance in a building is improved by moving closer to windows, glass with certain sun shielding films may block satellite signals.
- Position your vehicle to enhance reception, giving the antenna clear access to satellite signals. Signals from GPS satellites are transmitted to your GPS antenna. Do not cover the antenna area with your fingers or anything else.
- Stay in network coverage. Depending on who your service provider is, the network will provide your terminal with information that helps determine your location more quickly and accurately.

GPS Icon

When your terminal is receiving valid GPS location data, a GPS icon will be shown in the display:



Please note, that during emergency mode, your terminal will not display the GPS icon even when receiving GPS location data. If valid GPS location data is available when you leave emergency mode the GPS icon will be displayed again.

GPS Enable/Disable

1. From the main menu, press the **Menu** button and select **More... > Location > Interface**.

The current selection (**On/Off**) is highlighted.

2. Select the new choice. The display shows:

On – Location Service On

Off – Location Service Off

Entering GPS Location Service

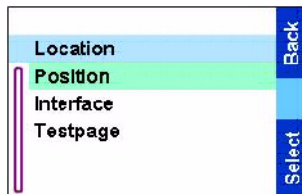
To enter the GPS sub-menu, press the **Menu** button and select **More... > Location**:

Position – provides the actual position information.

Interface – allows you to enable/disable the GPS location service.

Test Page – provides detailed position information.

Scroll to your selection and press **Select** to access the next display.



This estimate of accuracy of the calculated location is only a very rough estimate and may vary substantially from the actual accuracy of the approximate location information reported.

NOTE

The variation will vary in accordance to the GPS Configuration set by your Service Provider.

The availability of the GPS Location menus is dependent on your terminal configuration, please contact your Service Provider for further details.

Viewing Your Position

1. From the main menu, press the **Menu** button and select **More... > Location > Position**.
2. Scroll to view the entire screen.

This displays the following information about the last time your location was calculated (if available):

- The **time** the location was last calculated
- The **latitude** expressed in degrees, minutes, and seconds
- The **longitude** expressed in degrees, minutes, and seconds
- The **number of satellites** used to calculate the location. In general, more satellites make for better accuracy. The maximum is twelve satellites.

To calculate your location again, press **Rfrsh**.

It may take your terminal several minutes to complete the process of determining your location. During this time, a message usually appears on your terminal's display stating:

- Insufficient Visible Satellites, or
- Insufficient Visible Data

For tips on getting the best location calculation, see "Enhancing GPS Performance" on page 46.

The **Position** screen displays the updated information.

To cancel a location calculation before it is completed:

Press **Back** to return to the previous screen.

Each time approximate location of your terminal is calculated, the latest location information is stored in your terminal and remains there even when your terminal is powered off. You will see this information the next time you view the **Position** screen.

If you received a terminal call or alert while attempting to determine your location, the **Position** screen will disappear, but your terminal will continue attempting to determine its location. If it is successful, the new location information will be displayed the next time you view the **Position** screen.

The Menu

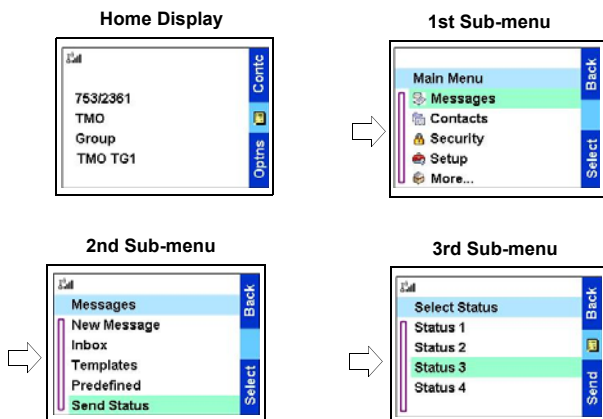
To Enter the Menu Items

You can enter the menu items during a call. If you are viewing a menu when a new call starts, the terminal will exit the menu.

1. Press the **Menu** button.
2. Scroll to the required item, press **Select** to select.

If the menu item contains a further set of menu items as in the example below, repeat step 2.

Navigating Menu Items



When scrolling up/down menu items, try also right/left scrolling. (This will select the item or return to previous level.)

To Return to the Previous Level








Press **Back**.

To Exit the Menu Items

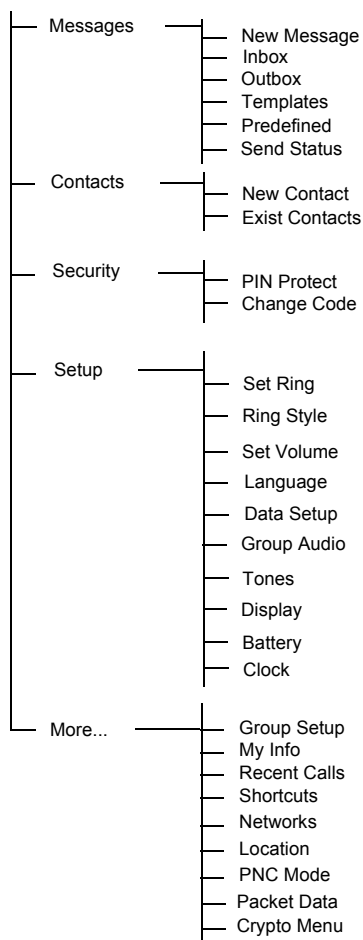
Press **On Hook** key.

Menu Icons

The following icons make it easy to identify the menu items at first glance.

Menu Icon	Description
	Main Menu Items/Context Sensitive Menu Appears above the Menu button if the main menu items/context sensitive menu are active.
	Messages <ul style="list-style-type: none">• Send status messages,• Send short text messages (free text or according to user defined or predefined templates),• Receive messages in Inbox.
	Contacts Add, search, edit, or erase entries in the contact list.
	Security Lets you turn On/Off and verify security features, and change passwords.
	Setup Allows you to customise your CM5000.
	More... Contains more customisable menu items.
	Scroll Bar Indicates navigation among items that occupy more than one screen. If all items appear in one screen, the scroll bar is empty.

List of Menu Items



NOTE

This is the standard menu layout. Your Service Provider may enable/disable some menu items or change their names.

Messages

Refer to “Messages” on page 89 for details.

Contacts

General

Contacts stores Private, Phone, and PABX numbers. Each Contacts entry can store several numbers. A Contacts entry contains:




- A **name** – A name is required if you are storing more than one number to the entry; otherwise, it is optional. Typically, this is the name of the person whose contact information is stored in the entry.
- A **Contacts type** – Each number stored must be assigned a Contacts type.
- A **number** – Each Contacts entry must contain a number. This may be any type of phone number and Private ID
- A **Speed Dial number** – When you store a phone number, it is assigned a Speed Dial number. You can accept the default Speed Dial number or change it.






NOTE

If set up by your Service Provider, it is not possible to create or edit Contacts or dial a number which is not in the Contacts list. The menu items for creating, editing, and deleting Contacts are not available.

Contact Icons

In the contact list display, the following icons may appear next to the contact numbers to indicate the type of stored number.

Contact Icon	Description
	Private ID Number
	Mobile Phone Number
	Home Phone Number

Contact Icon	Description
	Work Phone Number
	PABX Number
	Other Phone Number
 	Pickers Indicate more than one number is stored with the contact.

Selecting a Contact

To select a contact, use Up Arrow and Down Arrow keys. In addition, number keys can also be used. For example, the cursor is moved to the contact name that begins with an “A” when user presses **2** key once. The cursor is moved to the contact name that begins with a “B” when user presses **2** key twice.

When pickers are displayed around a number icon in the contact list, this means that there is more than one number assigned to the contact. These numbers can be selected by using Left/Right Arrow keys.

Creating a Contact

- From the Home display, press **Contcs**. Select **[New Contact]**.
OR
From the main menu select **Contacts**. Select **[New Contact]**.



2. Enter name. Press **Ok** to confirm.
3. Scroll left or right and select the type of stored number (such as Private).
4. Enter number (#). Press **Ok**.

5. Scroll up and down the entries.
Continue to enter other types and numbers, as you may keep several numbers (Private, Mobile, Home, Work, PABX, Other, Speed Dial number) for the same person under the same contact name. To correct an entry, press **Change**.
6. When finished, press **Done**. Press **Back** to return to Home display.

NOTE

One contact can have the following numbers assigned to it: Private Number, Mobile Number, Home Number, Work Number, PABX Number, Other.

Editing a Contact

1. From the contact list, scroll to the entry you want to edit.
2. Press the **Menu** button to enter Contacts Menu. Select **Edit**.
The entry details screen displays.
3. Follow the instructions in "Selecting a Contact" on page 55 to edit the various fields.

Deleting a Number

1. From the contact list, scroll to the entry that contains the number you want to delete.
2. Scroll left or right to display the contact type for the number you want to delete.
3. Press the **Menu** button.
4. Select **Delete Number**.

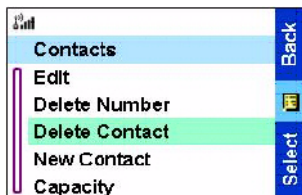
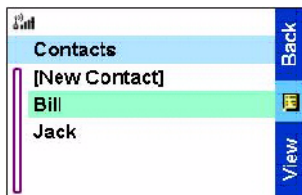
5. Press **Yes** to confirm.

NOTE

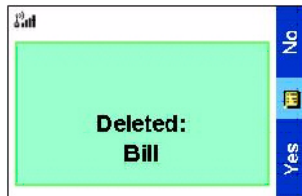
If an entry contains only one number, deleting the number deletes the entry.

Deleting a Contact

1. From the contact list, scroll to the entry you want to delete.
2. Press the **Menu** button.
3. To delete the entire entry, select **Delete Contact**.



4. Press **Yes** to confirm.



Deleting All

To delete all the contacts:

1. From the contact list, press the **Menu** button.
2. Select **Delete All**.
3. Press **Yes** and **Yes** once again to confirm.



Capacity

You can check how many numbers are used and how many numbers remain free in your Contact list.

To check the capacity:

1. From the contact list, press the **Menu** button.

OR

From a contact detail display, press the **Menu** button

2. Select Capacity.

3. Select from the following options:

- **Private** – shows Private numbers capacity
- **Phone/PABX** – shows Phone/PABX numbers capacity
- **Contact** – shows contacts capacity

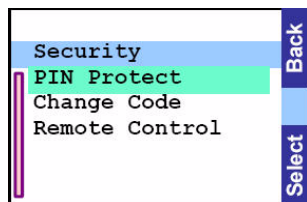
4. Select Back to exit.

Security

From the main menu, select >

Security

or > **More...** > **Security**



PIN Protect

Network access protection is configured by your Service Provider:

- No access to network operation – you can only send or receive Emergency Calls and adjust the volume level. Unit lock takes effect at the next power on.

To protect access to network operation:

- 1. From the main menu, select Security > PIN Protect.**
- 2. Select On and press Select.**
- 3. At the Input Code prompt enter the 4-digit code (factory setting 0 0 0 0). To avoid disclosure of the code, asterisks are displayed instead of the code digits. The display will show the following message:**

NOTE

This function does not change your PIN code on your SIM card.

Unit Locked – you entered the correct code. The display returns to the Security sub-menu and shows the active setting: **On**.

To unlock the CM5000 before powering off:

1. From the main menu, select > **Security** > **PIN Protect**.
2. Select **Off** and press **Select**.
3. At the **Input Code** prompt enter the 4-digit code. The display will show the following message:

Unit Unlocked – You entered the correct code. The display returns to the Security sub-menu and shows the active setting: **Off**.

To unlock the CM5000 after powering on, enter the code at the prompt. The CM5000 enters the Home display.

If you fail to enter the correct code, the following message will be displayed:

Incorrect Code Entered – You are prompted to try again. After failing, your CM5000 will be blocked. Please check with your Service Provider how many failed attempts are allowed.

Change Code

From the main menu, select > **Security** > **Change Code**.

NOTE

The default PIN code is 0000.

At the **Input Code** prompt, enter the 4-digit code. If the old code does not match the entered code at verification, the display prompts you to re-enter the old code.


If the entered code matches the old code, the display prompts you to enter a new 4-digit code and to repeat it for confirmation. If the confirmation code does not match the new code, the display prompts you to re-enter the new code.


When the new code is accepted, the display shows **Code Accepted** and returns to the Security sub-menu.

Remote Control

This feature can change SDS Remote Control functionality on the Controlled MT side.

Locking/Unlocking the Keypad

To prevent accidental key/button presses, press the **Menu** button and then .

To unlock the keypad, press the **Menu** button, and then .

NOTE

*When there is an incoming call and the keypad is locked, you can still use the **PTT**, **Off Hook** and **On Hook** key.*

NOTE

*The **Emergency** button is not locked. Entering Emergency Operation unlocks all keys.*

Setup

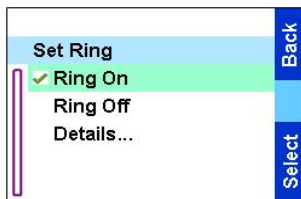
From the main menu, select **Setup**.

This sub-menu allows you to change your CM5000 configuration: ring style, volume, language, data setup, speaker, tones, and display.

Setting the Ring Tone

From the main menu, select **Setup > Set Ring**.

You can turn on or off the ring tone by selecting the respective option.



To turn on or off the ring for incoming calls and messages separately select **Details**. Select the desired option:

- **Ring Calls** – to set the ring for incoming calls to on/off.
- **Ring Msgs** – to set the ring for incoming messages to on/off.



Setting the Ring Style

This sub-menu allows you to set the incoming call ring style.

From the main menu, select **Setup > Ring Style**.

Upon entry into this sub-menu, the display shows the current ring style used.

To set the ring style scroll to the desired style and press **Select**.



Setting the Volume

This sub-menu allows you to adjust the ringer, earpiece, speaker, and keypad tone volume.

To set the volume:

1. From the main menu, select **Setup > Set Volume**.



2. Scroll through the list:

- **Ringer Vol** – sets ringing tone volume.
- **Speaker Vol** – sets speaker volume (the same as volume knob).
- **Keypad Vol** – sets keypad pressing tone volume.

3. Select the required item, and press **Change**.

4. Adjust the volume level using the left/right navigation keys or Rotary Knob. A feedback tone is heard, and a volume level bar is displayed.

5. Press **Back** to exit.

6. Press **Done** to accept the settings.

Setting the Display's Working Language

From the main menu, select **Setup > Language**.

The display shows the current language used. You can customize your CM5000 to operate in English, German, French, Spanish, Dutch, Swedish, Norwegian or in a language defined by your Service Provider. The default setting from factory is English.

Scroll to the desired language and press **Select**. The display shows the selected language for a few seconds.



Setting Group Audio

1. From the main menu, select **Setup > Group Audio**.



2. The display shows the current audio setting. When set to:

- **Always Loud** – received audio is outputted through an external speaker despite the Speaker Control settings.
- **Speaker Control** – received audio is outputted accordingly to the Speaker Control settings.



3. Select the required setting.

NOTE

Incoming Private, Phone and PABX calls are always outputted accordingly to the Speaker Control settings.

Setting Tones

From the main menu, select **Setup > Tones**.

This sub-menu allows you to activate/deactivate the CM5000 tones.

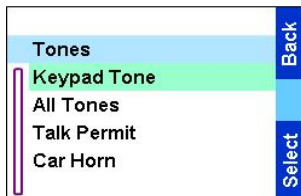
For a detailed list of tones, see Tones section.



Setting Keypad Tone

To activate/deactivate keypad tone at every key press:

1. From the main menu, select **Setup > Tones > Keypad Tone**.
2. Scroll through the settings (**On/Off**).
3. Choose required setting, and press **Select**, or press **Back** to exit.



Setting All Tones

To activate/deactivate all tones (keypad tone and other activity tones used in your CM5000):

1. From the main menu, select **Setup > Tones > All Tones**.
2. Scroll through the settings (**On/Off**).
3. Choose required setting, and press **Select**, or press **Back** to exit.

Setting Talk Permit Tone

There are 3 tone settings:

- **No Tone** (no tone heard upon pressing the **PTT**).
- **Short Tone** (a short tone heard upon pressing the **PTT**).
- **Normal Tone** (the factory-default tone heard upon pressing the **PTT**).

To change your Talk Permit Tone settings:

1. From the main menu, select **Setup > Tones > Talk Permit**.
2. Scroll through the settings.
3. Choose required setting, and press **Select**. Press **Back** to exit.

Setting Car Horn Tone

To activate/deactivate car horn notification about receiving individual call while the ignition is off:

1. From the main menu, select **Setup > Tones > Car Horn**.
2. Scroll through the settings (**On/Off**).
3. Choose required setting, and press **Select**, or press **Back** to exit.

Display Features

The display menu controls the display appearance.

From the main menu, select

Setup > Display:

- **Text Size** – sets size of text on the display.
- **Screen Saver** – covers the CM5000 display after the CM5000 stays idle for a pre-programmed period of time (if configured by your Service Provider).
- **Backlight** – a backlight lights the display and keypad when you make or receive a call, or press keys or buttons. Backlight can be set to Automatic or Disabled.
- **Wallpaper** – changes the wallpaper that appears on the idle screen.
- **Contrast** – sets the contrast of the display.



Setting the Text Size

1. From the main menu, select **Setup > Display > Text Size**.
2. Press **Change**. Select **Standard** or **Zoom** to see the text on the display in two sizes.



Screen Saver

1. From the main menu, select **Setup > Display > Screen Saver**.
2. Press **Change**. Press **Change** again and select the screen saver setting: **Auto** or **Disabled**. If set to Auto the screen saver turns on after 30 seconds of inactivity.
3. Scroll to **Text**. Press **Change**. Type/edit the screen saver text using the keypad. (For details on text editor use, see "Writing Text" on page 97).
4. Press **Done** to exit.

Setting the Backlight

You can set the function and brightness of the backlight.

To enter your backlight settings sub-menu:

1. From the main menu, select **Setup > Display > Backlight**.
2. Press **Change**.
3. Select required setting.
 - Function – your CM5000 has 4 backlight settings:
 - Automatic** – Any key press turns the backlight on. The backlight remains on until the pre-programmed timer runs out.
 - Disable** – The backlight feature is disabled.
 - Semi-automatic** – Per default the backlights are switched off. You can switch the backlights on by pressing the Enter key. After a few seconds (configured by your Service Provider) the backlights switch

off automatically.

Manual – The backlight remains on. To turn the backlight on/off press the Clear key.

- Brightness – you can set the brightness to High or Low.

Setting the Wallpaper

1. From the main menu, select **Setup > Display > Wallpaper**.
2. Press **Change**.
3. Select required setting (**On/Off**).
4. Press **Done** to exit.

When On is set, the radio displays pre-programmed wallpaper in the background

Setting the Contrast

1. From the main menu, select **Setup > Display > Contrast**.
2. Press **Change**.
3. Use the left/right navigation keys or Rotary Knob to adjust the contrast.
4. Press **Ok**.
5. Press **Done** to exit.

Battery Level

From the main menu, select
Setup > Battery.

The display shows Battery level.



Clock

The Clock menu controls the displayed time and date.

From the main menu, select **Setup > Clock**.

Viewing Current Time and Date

From the main menu, select **Setup > Clock > Time**.

The display shows the current time and date.

Setting Time and Date

To set time manually:

1. From the main menu, select **Setup > Clock > Set Time**.
2. In **Auto Time Set** display select **Off**.
3. Enter time and date using the navigation key and press **Ok**.
4. Enter time lag (time difference between local time and the UTC) using the navigation key and press **Ok**. The **Time Set** confirmation appears.

To synchronize time settings automatically:

1. From the main menu, select **Setup > Clock > Set Time**.
2. In **Auto Time Set** display select **On**.
3. Enter time lag (the time difference between local time and the UTC) using the navigation key and press **Ok**. The **Auto Time Set On** confirmation appears.

NOTE

If time and date are synchronized by the infrastructure, that is Auto Time Set is enabled, and the terminal is not within the infrastructure signal range you can set the values manually.

Setting Date Format

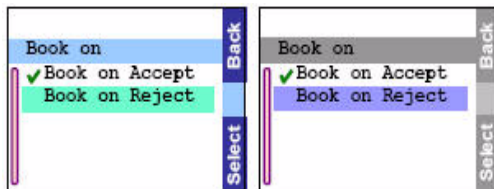
To change displayed date format between Day/Month/Year, Month/Day/Year and Year/Month/Day:

1. From the main menu, select **Setup > Clock > Date Format**.
2. Scroll through the settings.
3. Choose required setting, and press **Select**. The **Set Date Format** confirmation appears.

Setting Book on Setup

Any radio (if the Book On is enabled by the Service Provider) can be assigned by the service provider to one person. You are going to see only screen with your login and the full service is granted from this point.

From the main menu, select **Book On Setup**
Menu > Setup > Book on Setup.



You have two options:

- **Book on Accept** – radio is going to accept all the book on requests.
- **Book on Reject** – radio is going to reject all the requests from the Service Provider and user is not going to see any notification.

NOTE

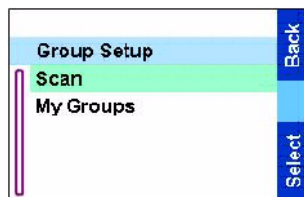
When the Book on feature is disabled by the Service Provider user is not able to change Book on setup.

More...

From the main menu, select **More**. This sub-menu Contains more customisable menu items.

Entering Group Setup

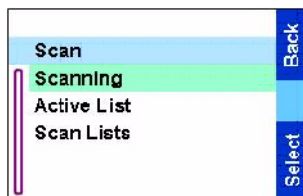
From the main menu, select **More > Group Setup**. This sub-menu allows you to set the Scan and My Groups features.



Group Scan

From the main menu, select **More > Group Setup > Scan**.

This sub-menu allows you to activate/deactivate scanning, view the active scan list, and edit the scan lists.



Scanning

This sub-menu allows you to activate/deactivate the scanning of a list of pre-defined groups programmed in the CM5000. The CM5000 will join any group call as long as this group is defined in the scan list and scan is turned on.

From the main menu, select **More > Group Setup > Scan > Scanning**.

After completing the settings, the display returns to the Scan sub-menu.

NOTE

When the CM5000 is in DMO, Gateway or Repeater modes you cannot activate the scanning. An error message will be displayed.

Active List

This sub-menu allows you to view the active scan list.

1. From the main menu, select **More > Group Setup > Scan > Active List**. Press **View**.
2. Scroll to the required list and press **View** to see the groups that belong to the list.
3. Scroll to the required group and press **View** to view the group status (attached or not attached) and priority (if pre-programmed).
4. Press **Back** to return to the previous display. Then, if required, press the **Menu** button. You can select to **delete** the group from the scan list or **change** its priority.

NOTE

If the Network List is empty, it will not be displayed.

Scan Lists

1. From the main menu, select **More > Group Setup > Scan > Scan Lists**.
2. Scroll to the required scan list. Press **View** to see the groups used in the scan list. Press **Back** to return to the previous display.
3. To edit/view the contents of a scan list, press the **Menu** button.
4. In the List Optns sub-menu, scroll to the required option and press **Select**.
 - **Rename** the active scan list. Enter a new name (alias) and press **Ok**. The display shows the new setting.
 - Check the **capacity** of the active scan list (number of groups stored in the list).
 - To **Clear** all groups from the selected scan list, press **Yes**. You will be prompted to remove all groups from the selected scan list.
 - **Add** a group to the selected scan list. Every added group (including a favourite group) comes with its folder, its name or number, and its priority (if pre-programmed).
 - > To select a folder, scroll through the folder list. The list does not show folders whose groups are fully used in the selected scan list. Press **Ok** to select a folder.
 - > To select a group, scroll through the group list within the selected folder. The list shows groups that are not in the selected scan list. Press **Ok**.
 - > To set a priority to a group, scroll through the priority list: high, medium, or low.

A call from a high priority group will interrupt an on-going call with a medium and low priority.

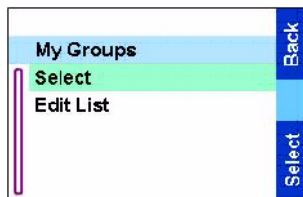
A call from a medium priority group will interrupt an on-going call with a low priority.

A call from a low priority group will not interrupt any on-going call.

- **Edit** the scan list groups.
 - > Scroll to the group you wish to remove from the selected scan list, and press **Delete**. You will be prompted to remove the selected group. After a few seconds, the display shows the updated scan list.
 - > To change the group priority, press **Priority**. Scroll to the selected priority and press **Select**.

My Groups

This sub-menu allows you to select/edit your favourite group list.



Selecting a Group from My Groups

1. From the main menu, select **More > Group Setup > My Groups > Select**. (If the folder is empty, add groups.)
2. The screen returns to the Home display. My Groups is displayed as the first highlighted folder in the list of folders. You can now scroll through the favourite group list. Press **Select** to confirm your choice.

When selecting **My Groups** and no groups exist from the current DMO/TMO, you may be forced to switch from TMO to DMO or from DMO to DMO. In this case you will be prompted to accept the mode change.

Adding a Group to My Groups

1. From the main menu, select **More > Group Setup > My Groups > Edit List > [New Group]**.
2. Select a group by folder search ("**TMO/DMO by Folder**"). Select the folder and select the group. The group is added to the "My Groups" folder. *OR*, select a group by alphabetic search ("**TMO/DMO by abc**"). Enter the first character of the group's name.

Deleting a Group from My Groups

1. From the main menu, select **More > Group Setup > My Groups > Edit List**.
2. Select the group you wish to remove. Select **Yes** to confirm removal.

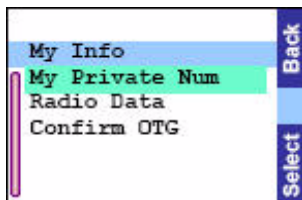
Deleting All Groups from My Groups

1. From the main menu, select **More > Group Setup > My Groups > Edit List**.
2. Press the **Menu** button. Select **Delete All**. Select **Yes** to confirm removal.

Viewing Personal Information

Use this feature to view your own private number at any time.

1. From the main menu, select **More > My Info**.
2. Select **My Private Num**.



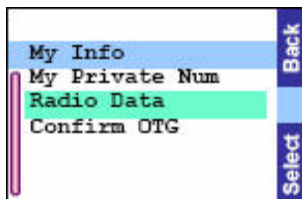
Viewing Radio Data

Use this feature to view detailed terminal information.

1. From the main menu, select **More > My Info**.
2. Select **Radio Data**.

The terminal shows:

manufacturer name, model



name, TEI number, ISSI number, GSSI number, radio (terminal) software version, panel (control head) software version, and OPTA data if SIM function is supported). You can scroll through the information using the up/down navigation keys.

Viewing OTG Configuration

Use this feature to view group information assigned to the One Touch Group (OTG) button.

1. From the main menu, select **More > My Info.**
2. Select Confirm OTG.

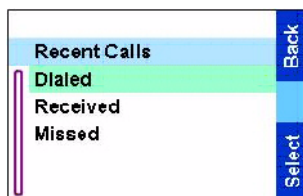


Recent Calls

From the main menu, select **More > Recent Call.**

You can view the history of all calls:

- **Dialled Calls**
- **Received Calls** – calls you answered
- **Missed Calls** – calls received but not answered, or rejected by the CM5000.



Each list of calls may contain up to 10 numbers, the most recent call being at the top of the list.

If the number of a recent call is stored in the contact list, the name associated with the number appears in the recent calls list.

An icon appears beside the name or number, indicating the contact type of the number used in the call. See “Contacts” on page 54.

Old calls remain in your recent calls list until you delete them or until they reach the end of the list.

A number dialled more than once, will appear only once in the list.

You can make a Phone, PABX, or Private Call from the entry, depending on the entry you are selecting in the list.

Shortcuts

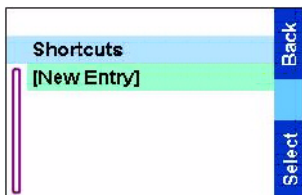
Use shortcuts to access frequently used menu items.

From the main menu, select

More > Shortcuts.

The display shows the shortcut list.

You can access a shortcut by pressing **Menu** button and then the respective numeric key.



Creating Menu Shortcut

For example, let's create a shortcut to the All Tones options.

1. From the main menu, select **Menu > Setup > Tones**, then highlight **All Tones**.
2. Press and hold the **Menu** button until a confirmation screen appears. Press **Yes** to confirm.
3. The first free position is assigned as a shortcut key. A confirmation screen appears. Press **Done** to confirm.

Editing Shortcuts

1. From the main menu, select **More > Shortcuts**.
2. Scroll to the shortcut you wish to edit.
3. Press the **Menu** button and select **Edit**.
4. After a few seconds, you will be prompted to confirm the newly created shortcut. The first free position is assigned as a shortcut key. Press **Yes** to confirm. Press **No** to cancel.

If the number is already assigned as a shortcut for another option, you will be asked to replace the current shortcut number with a newly created one.

Deleting a Shortcut

1. From the main menu, select **More > Shortcuts**.
2. Scroll to the shortcut you wish to delete.
3. Press the **Menu** button and select **Delete**. Press **Yes** to delete a shortcut. Press **No** to cancel.

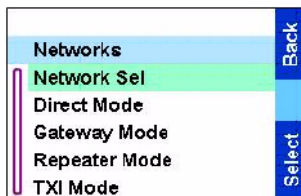
Deleting All Shortcuts

1. From the main menu, select **More > Shortcuts**.
2. Press the **Menu** button and select **Delete All**. Press **Yes** to delete a shortcut. Press **No** to cancel.

Networks

From the main menu, select **More > Networks**.

This sub-menu allows you to select the network your CM5000 registers to, and what mode it operates on.



Selecting Home Only Network Registration

From the main menu, select **More > Networks > Networks Sel > Home Only**.

Selecting this sub-menu causes your CM5000 to recognise the first network on the allowed network list only and to register to it.

Using the Select Net Registration

If configured by your Service Provider, this sub-menu allows you to select manually the network from the allowed network list you want your CM5000 to be registered to.

1. From the main menu, select **More > Networks > Networks Sel > Select Net**.
2. The list of the allowed networks is displayed. Scroll to the desired network.

A network may have an alias. Press the **Menu** button to view the network ID. Then press **Select**.

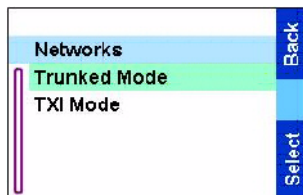
3. Return to the Home display. The display shows the network ID or alias.

Selecting Trunked Mode

This sub-menu allows you to select the mode your CM5000 will be operating on.

To set up your operating mode:

1. From the main menu, select **More > Network > Trunked Mode**.
2. The CM5000 switches to Trunked Mode.

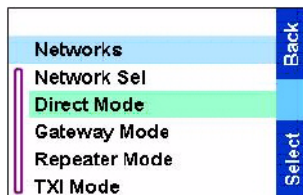


Selecting Direct Mode

This sub-menu allows you to select the mode your CM5000 will be operating on.

To set up your operating mode:

1. From the main menu, select **More > Networks > Direct Mode**.
2. The CM5000 switches to Direct Mode.

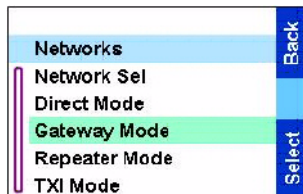


Selecting Gateway Mode

This sub-menu allows you to select the mode your CM5000 will be operating on.

To set up your operating mode:

1. From the main menu, select **More > Networks > Gateway Mode**.
2. The CM5000 switches to Gateway Mode.

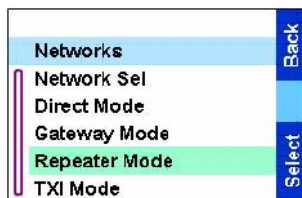


Selecting Repeater Mode

This sub-menu allows you to select the mode your CM5000 will be operating on.

To set up your operating mode:

1. From the main menu, select **More > Networks > Repeater Mode**.



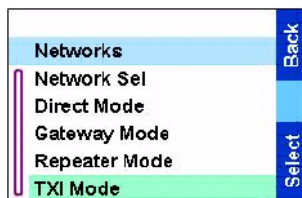
2. The CM5000 switches to Repeater Mode.

Setting Transmit Inhibit (TXI) Mode

This mode should always be set before entering areas where transmission is prohibited, e.g. in hospitals or in potentially explosive areas.

To activate the TXI Mode:

1. From the main menu, select **More > Networks > TXI Mode**.
2. Select **Activate**.



The CM5000 will sound the “Transmit Inhibit” tone. The display shows **TXI Mode** in the first row, and the solid amber LED indicates the TXI Mode.

NOTE

All menu items which cause transmitting are blocked in TXI Mode. It is not possible to change the group.

To deactivate the TXI Mode, e.g. after you have left the area where transmission is prohibited:

1. From the main menu, select **More > Networks > TXI Mode**.
2. Select **Deactivate**.

The CM5000 sounds the “Transmit Inhibit” tone and exits TXI.

Location

To enter the location sub-menu, press the **Menu** button and select **More... > Location**:

Position – provides the actual position information:

This displays the following information about the last time your location was calculated (if available):

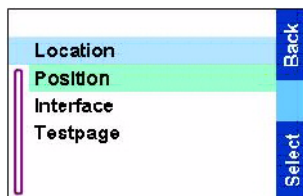
- The **time** the location was last calculated
- The **latitude** expressed in degrees, minutes, and seconds
- The **longitude** expressed in degrees, minutes, and seconds
- The **number of satellites** used to calculate the location. In general, more satellites make for better accuracy. The maximum is twelve satellites.

Interface – allows you to enable/disable the GPS location service.

Test Page – provides detailed position information.

This displays the following information (if available):

- **Position**
 - > The **time** the location was last calculated.
 - > The **latitude** expressed in degrees, minutes, and seconds.
 - > The **longitude** expressed in degrees, minutes, and seconds.
 - > The **antenna height**.
 - > The **direction** of travel.
 - > The **horizontal speed**.
 - > The **number of satellites** used to calculate the location.



- **Satellites**
 - > The satellite **number**
 - > The satellite **status**
 - > The satellite **signal strength**
- **Version**
 - > The GPS module **software version**.

Scroll to your selection and press **Select** to access the next display.

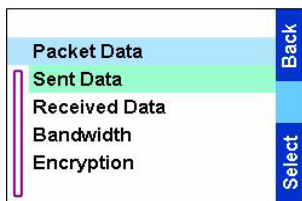
This estimate of accuracy of the calculated location is only a very rough estimate and may vary substantially from the actual accuracy of the approximate location information reported.

Packet Data

To enter the packet data sub-menu, press the **Menu** button and select **More... > Packet Data**.

This menu item allows to display statistical values related to a packet data connection. If Multi-Slot Packet Data Service is enabled by your Service Provider the screens present information about

- Amount of sent data,
- Amount of received data,
- Bandwidth of the data session
- Data encryption status.



NOTE

Data services are only available in TMO.

Viewing Sent Data Statistics

To view sent data statistics select **Sent Data** in the Packet Data sub-menu.

The number of KBytes sent since current packet data activation is displayed. Additionally the throughput is shown:

9 kbps (e.g.) – active packet data session.
N.A. – standby packet data session.

Sent Data	Back
Sent	
100KB	
Throughput	
9kbps	

Viewing Received Data Statistics

To view sent data statistics:

1. Select **Received Data** in the Packet Data sub-menu.
2. The number of KBytes received since current packet data activation is displayed.

Additionally the throughput is shown:

9 kbps (e.g.) – active packet data session.
N.A. – standby packet data session.

Received Data	Back
Received	
990KB	
Throughput	
9kbps	

Viewing Bandwidth Status

The bandwidth percentage represents the number of allocated time slots (“channels”) during the data session.

1. Select **Bandwidth** in the Packet Data sub-menu.
2. The bandwidth percentage is shown

75% (e.g.) – active packet data session,
N.A. – standby packet data session.

Bandwidth	Back
75%	

NOTE

Your Service Provider has set the maximal number of time slots to allocate to 1, 2, 3, or 4. The bandwidth percentage refers to the possible number of slots (1, 2, 3, or 4) as 100%.

Example:

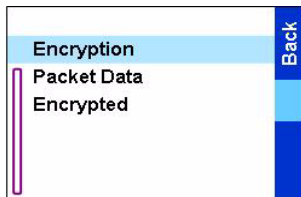
50% is displayed, if 2 of 4 possible slots are allocated.

100% is displayed, if 4 of 4 possible slots are allocated.

100% is displayed, if 1 of 1 possible slot is allocated.

Viewing Encryption Status

1. In the Packet Data sub-menu select **Encryption**.
2. The encryption state of the ongoing packet data session is displayed:
 - **Encrypted**
 - **Not Encrypted** (clear)

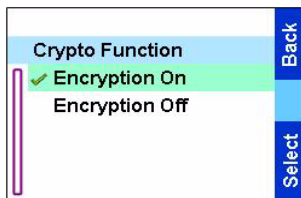
**Crypto Menu**

To enter the encryption sub-menu, press the **Menu** button and select **More... > Crypto Menu**.

This menu allows setting the End-to-End Encryption options.

**Enabling/Disabling End-to-End Encryption**

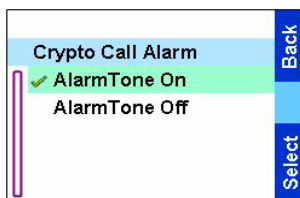
1. From the main menu, select **More > Crypto Menu > Crypto Function**.
2. Select **Encryption On** to enable or **Encryption Off** to disable the End-to-End Encryption and press **Select**.



Setting Alarm Tone

The Alarm Tone notifies about any clear transmission.

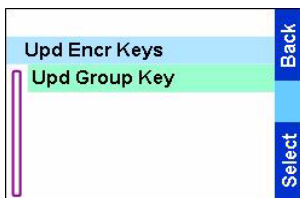
1. From the main menu, select **More > Crypto Menu > Clear Call Alarm**.
2. Select **Alarm Tone On** to enable or **Alarm Tone Off** to disable the alarm tone and press **Select**.



Updating Encryption Keys

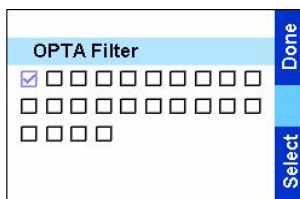
1. From the main menu, select **More > Crypto Menu > Upd Encr Keys**.
2. Select **Upd Group Key** to start the update and press **Select**.

You can update the keys if the End-to-End encryption is enabled. The keys cannot be updated the terminal is in a call or in DMO.



Setting OPTA Filter

1. From the main menu, select **More > Crypto Menu > OPTA Filter**.
2. Check boxes using the navigation key and **Select** to set which characters of OPTA name are masked when the OPTA name is displayed.
3. Press **Done** to confirm the changes.



Crypto Registration

1. From the main menu, select **More > Crypto Menu > Crypto Register**.
2. Select **Start Register** to start the registration and press **Select**.

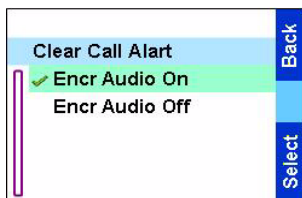
You cannot start the registration if the terminal is in a call or in DMO.



Audio Settings

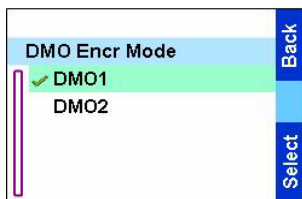
This menu changes the audio output for a group call when the call is encrypted but the End-to-End Encryption is disabled.

1. From the main menu, select **More > Crypto Menu > Audio Settings**.
2. Select **Encr Audio On** to enable or **Encr Audio Off** to mute the encrypted audio for clear mode and press **Select**.



DMO Encryption

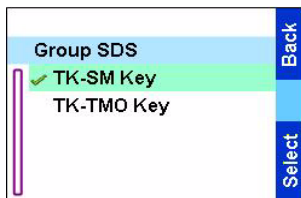
1. From the main menu, select **More > Crypto Menu > DMO Encr Mode**.
2. Select **DMO1** or **DMO2** to enable the required mode and press **Select**.



SDS Encryption Keys

This menu changes the encryption keys for Group and Individual SDS messages.

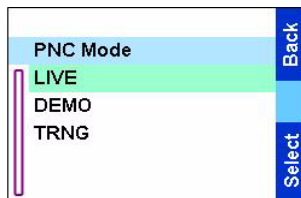
1. From the main menu, select **More > Crypto Menu > SDS Encr Keys**.
2. Select **Group SDS** or **Individual SDS** as relevant and press **Select**.
3. The display shows the current settings. Select the appropriate key or press **Back** to exit.



PNC Mode

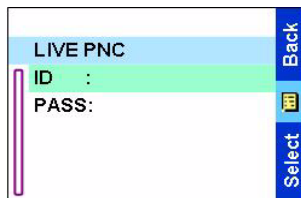
To enter the PNC Mode sub-menu, press the **Menu** button and select **More... > PNC Mode**.

This menu is available only if configured by your Service Provider.



Login Operation

1. Select Live, Demonstration, Training mode as appropriate.
2. In the login display select **ID** and type in your ID. To confirm press **OK**.
3. Back in the login display select **PASS** and type in your password. To confirm press **OK**.



Login History

Login ID History displays the IDs of the previous users for the particular terminal. Login ID History enables you to login using one of the previously used IDs.

To enter the history menu, from the login display press the **Menu** button and select **History**.

Password Change

If you are logged to the PNC server, you can change your password for the currently used Login ID.

To enter the history menu:

1. From the login display press the **Menu** button and select **Chg Password**.
2. Type in your current password and press **OK**.
3. Type in the new password and press **OK**.
4. Type in the new password again and press **OK** to confirm.

RUA/RUI Settings

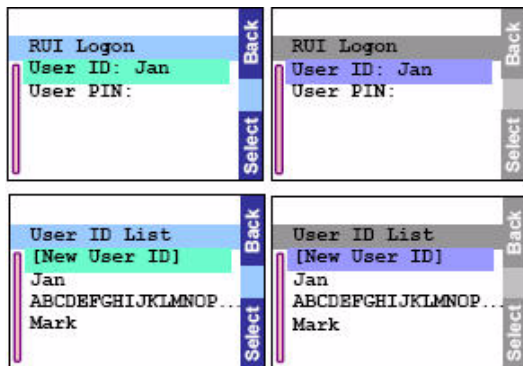
It gives more flexibility to the users to pick any radio and log on with it and have a full access to the service. All the services are forwarded to the radio that you are logged on to.

NOTE *If the Service Provider disables this feature, full service is granted without logging.*

Log On

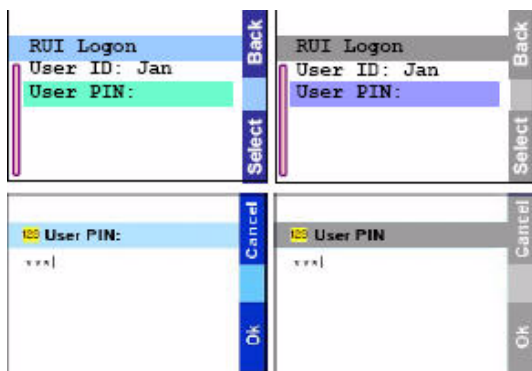
From the idle screen you need to press the **Menu** button and select **More... > RUI > Log on**

1. Select **User ID** and choose your login from the list and press **Select** or enter the new one by selecting **[New User ID]**. Type your **User ID** and press **OK**.



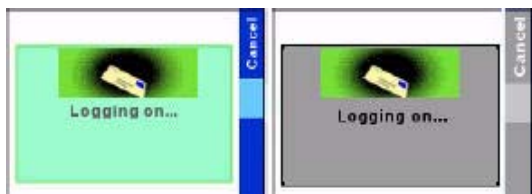
2. Type your **User PIN**

When the **User PIN** is highlighted press **Select** and type your User PIN on the next screen then press **Ok**.



3. Logging

From this point the request to logon is sent. You can stop the logging process by pressing **Cancel**. When the logging process ends the display is changed to idle screen.



Log On can be accepted, accepted for a period of time, or rejected.

Timeout pending warning

Before logon timeout timer expires, **Logon timeout pending** screen is displayed. To ignore this message, press **Ignore** key. To re-logon, press **Logon** key.

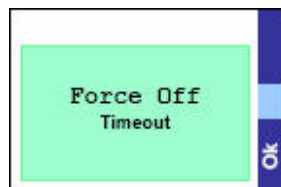


Log Off

You can change the state that you are logged on by pressing **Menu** button > **More...** > **RUI** > **Log Off** from the idle screen. The radio prompts to accept log off state or to deny it (if you selected it by mistake).

Force Off

The Service Provider can log off the user. Radio informs the user about the result and the reason of Force Off state.



Messages

General

The messaging feature lets you:

- send short text messages (free text or according to user defined or predefined templates),
- send status messages,
- receive messages.

A status is a number corresponding to a pre-programmed message in a list your group recognises. A text message is a short text containing up to 140 characters. Each message is stamped with the date and time it was left in the inbox.

NOTE

If configured by your Service Provider it is only possible to send a message to a private number that is stored in the Contacts list.

Entering the Messages Sub-menu

From the main menu, select **Messages**.

The sub-menu allows you read text messages, send text messages, and send status messages.

Scroll to your selection and press **Select** to access the next display.



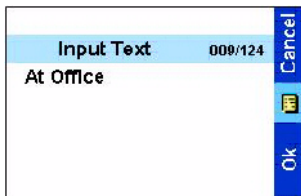
Creating a Message

1. From the main menu, select **Messages > New Message**.
An empty screen will open.



2. Type/edit your message using the keypad.

Press the **Menu** button. Select **Store** to add your message to the template list. The number assigned to the message is the lowest free number.



NOTE

When character format is set to "8 bit" with the Native Programmer and number of input character is more than 141 characters, inputted text is sent as concatenated text messages automatically.

Sending the Message

1. From Input Text display press **Ok**.
2. Select target **Private** number, a **Group**, **Phone** or **PABX** number.
3. Select the recipient (for example, select a talkgroup or input a private number).
4. Select **Send** to send the message.



The display will show one of the following delivery reports:

- **Message Delivered** – to indicate that the message was successfully sent and received.
- **Message Failed** – the message was not received. The bottom line shows the reason of the failure.

After sending the message, your CM5000 will return to the templates list or to the message editor screen.

NOTE






It is recommended to wait for the message acknowledge before sending a new message.

Using the Inbox

The inbox list contains new or old incoming text messages. The inbox list can contain 20 messages at any time.

Inbox Icons

The following icons indicate the status of messages in the Inbox.

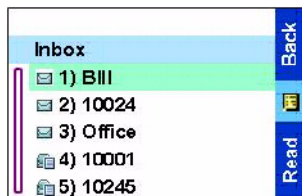
Inbox Icon	Description
	Unread (New) Message Indicates that you have not read the message yet.
	Corrupted Concatenated Message Indicates that the concatenated message was not received completely.
	Read (Old) Message Indicates that you have read the message.
	Sender Information in Message View Indicates sender information (name or number).
	Time and Date Stamp in Message View Indicates the time and date of message arrival.

Entering the Inbox

From the main menu, select **Messages > Inbox**.

The status of the list is displayed for a few seconds:

- **No New or Old Messages** – the screen returns to the previous display within a few seconds.
- **Inbox Info** – press any key or wait for a few seconds. The display shows messages list.



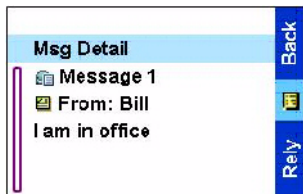
Reading a Message in the Inbox

1. Scroll to the message.
2. Press **Read**.

New Message Received

If you press **Back**, you dismiss the message. You can access the message later from the inbox.

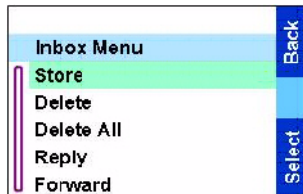
1. Select **Read** to read the entire message. Reading a new text message changes its state from New to Old. The read message is kept in the Inbox.
2. The display shows the incoming message, its number, sender, and the first line of the text message.



Handling Messages

When in the inbox or after reading the message, press the **Menu** button and select one of the following options:

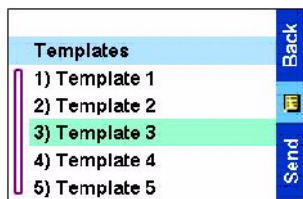
- Select **Store** and press **Select** to store the message as a template in the template list.
- Select **Delete** and press **Yes** to delete the message. When the display shows "**Deleted: Message n**", the current message is deleted from the Inbox. The display shows the next message (if any) or the message list.
- Select **Delete All** and press **Yes** to delete all the messages. When the display shows "**Deleted: All Messages**", all the messages are deleted from the Inbox. The display shows the next message (if any) or the Messages sub-menu.
- Select **Reply**. This invokes the edit screen. Edit message text and press **Ok** to reply to the message originator.



- Select **Forward**. This invokes the edit screen. The old message body serves as the default message. Press **Ok** to forward the message to selected target. See “Sending the Message” on page 90.
- Press **Back** to return to the previous display.

User Defined Templates

The user defined mail templates are received, new, sent or programmed messages that are stored in the templates list and may be used for sending messages.



1. From the main menu, select **Messages > Templates**. The first template in the template list is displayed.

NOTE

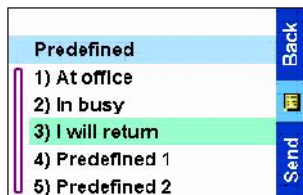
It is possible that the templates numbers are not consecutive.

2. In the templates list, scroll to the template you want to use. Press the **Menu** button and select one of the following options:

- **View** to view the message in the template
 - **Edit** to edit the message in the template for your needs. Press the **Menu** button to enter the Editor Menu. Select **Store** to save the edited template.
 - **Delete** and press **Yes** to delete the template. When the display shows “Deleted: Template n”, the current template is deleted from the Inbox. The display shows the next template (if any) or the templates list.
3. Send the template. See “Sending the Message” on page 90.

Predefined Templates

Predefined mail templates are templates that are programmed into your CM5000 by your Service Provider.



You are allowed to perform limited edit operations of the predefined template and to send it, but you will not be able to store the edited template or erase it from the predefined template list.

From the main menu, select **Messages > Predefined**.

The first template in the predefined template list is displayed (if no predefined template exist, the message **No Predefined** will be displayed).

Sending a Predefined Template

1. Press **Send** or **PTT** to send the message.
2. The display will show one of the following delivery reports:
 - **Message Delivered** – to indicate that the message was successfully sent and received.
 - **Message Failed** – the message was not received.
3. After sending the message, your CM5000 will return to the predefined template list or to the message editor screen.

NOTE

It is recommended to wait for the message acknowledge before sending a new message.

Sending a Status Message

1. From the main menu, select **Messages > Send Status**.

2. In this example, Status 3 is the last sent status. If you wish to send a different status, scroll to your selection in the list of pre-programmed statuses, or key the status number.

Select Status
1) Status 1
2) Status 2
3) Status 3
4) Status 4
5) Status 5

3. Press **Menu** button and then select **View** to view the status message. Press **Back** to return to the status list.

Status Menu
View
Send



Status View
Status 3
36870

4. Press **Send** to continue.
5. Select the target for the status.
6. Depending on the target chosen:

- Private
In the Input Dial screen type the recipient's private number or press the Menu button to select the recipient's private number from the Contacts List.
- Group
In the TalkGroup List screen select the a group from the groups list to send the status message.
- Phone or PABX
In the Input Dial screen type the recipient's phone number or press the Menu button to select the recipient's phone number from the Contacts List.

Target Selection
Private
Group
Phone
PABX

7. For Private, Phone, and PABX press **OK** to send the status message.

Selecting the Text Entry Mode

Text entry modes make it easy for you to enter names, numbers, and messages.

In the text entry screen, select the **Menu** button > **Entry Mode**, and then select one of the following modes:

- **Primary** – for entering alphanumeric characters (lowercase, uppercase, and title case)
- **Numeric** – for entering numbers only
- **Symbol** – for entering symbols only

In the text entry screen, you can press **0** key repeatedly to change between lowercase, uppercase, and title case.

You can also press **#** key repeatedly to change between letters, numbers, or symbols.

Icons

In the text entry screen, icons tell you which text entry mode and method you are using. A character counter icon indicates the number of entered characters.

Primary Icons	Description
abd1	No capitals
Abc1↑	Capitalise next letter only
ABC1↑	All capitals

Numeric Icon	Description
123	Enter numbers.

Symbolic Icon	Description
@	Enter punctuation and symbols.

Keys Usage

- Except for keys 0 and 1, the top line for each key shows numbers and uppercase characters, and the lower line shows numbers and lowercase characters.
- Press and hold any numeric key to enter Numeric mode.

List of Keys and Characters in Alphanumeric Mode:

Key	Alphanumeric Mode (TAP)
0	Press to cycle through lowercase, uppercase, and title case.
1	. 1 0 ? ! , @ _ & ~ : ; " - () ' ` % £ \$ ¥ ¤ + × * / \ [] = > < # \$
2	A B C 2 Á Â Ã Ä Å Æ Å a b c 2 á â ã ä å æ å
3	D E F 3 É Ê Ë Ì d e f 3 é ê ë ì
4	G H I 4 Ì Î Ï g h i 4 ì î ï
5	J K L 5 j k l 5
6	M N O 6 Ó Ô Õ Ö Ø m n o 6 ó ô õ ö ø
7	P Q R S 7 p q r s 7
8	T U V 8 Ú Û Ü Û t u v 8 ú û ü ü
9	W X Y Z 9 w x y z 9

List of Keys and Characters in Numeric Mode:





Key	Numeric Mode
0 to 9	• Press to enter digit at insertion point.

List of Keys and Characters in Symbol Mode:

Key	Symbol Mode
0	+ - * / \ [] = > < # §
1	. 1 0 ? ! , @ _ & ~ : ; " - () ' ` ¨ ¡ ¢ £ \$ ¥ ¤ + × * / \ [] = > < # §
2	@ _ \
3	/ , ;
4	“ ” & ‘ ’
5	() [] { }
6	¨ ¨ ¨ ~
7	< > =
8	£ \$ ¥ ¤
9	# % *

Other Keys:

Key	Description
Any numeric key	• Press and hold to enter Numeric mode
*	• Press to insert a space. • Press and hold to enter a carriage return.

Key	Description
#	<ul style="list-style-type: none"> Press once to cycle through all entry modes (symbolic, numeric, primary). Press and hold to return to the default entry mode.
Select	Press to select the highlighted choice and place it in the main text area.
Delete	<ul style="list-style-type: none"> Press once to delete the last entered character. Press and hold for long to clear the entire main text area.
	Press to navigate up one line in a long text (several lines). Press and hold to repeat.
	Press to navigate down one line in a long text (several lines). Press and hold to repeat.
	Press to navigate to the left. Press and hold to repeat.
	Press to navigate to the right. Press and hold to repeat.
Menu	Opens the Context Sensitive Menu if a context sensitive menu is active.

Writing in Numeric Mode

1. Press # key to scroll to numeric mode. (OR, press and hold any numeric key to enter Numeric mode.)
2. Press the relevant numeric keys to insert the digits.


Writing in Symbol Mode

1. Press # key to scroll to symbol mode.
2. Press 1 key. A series of symbols and punctuation appear on the screen.
3. Scroll to the symbol and press **Select**.

What to do if...

Your CM5000 flashes the following messages:

Messages	Message Description
...-Rcvd	Call received but not answered, or rejected
Attachment Failed	The CM5000 could not perform talkgroup attachment. The CM5000 keeps on trying. If it does not succeed, try another talkgroup.
Authenticate Failure	The CM5000 could not register on an Authenticated system (for example, the Authentication key is incorrect, or Authentication is disabled in the CM5000).
Call Cancelled	Called CM5000 cancelled the call.
Call Ended	<ul style="list-style-type: none">Faulty channel. Please try later.Called CM5000 ended the call.
Call Preempted	Channel being used for priority.
Emgcy In Use: Wait For Mic	The Hot Microphone feature is active, but the channel transmit grant has been given to another Emergency Call on the same talkgroup. The CM5000 microphone is not active during this time, but the CM5000 will automatically try to regain talk permit after a predetermined time.
Emgcy Mic Ended	The Hot Microphone timer has automatically expired, or the user has pressed the PTT button to cancel the Hot Microphone feature.
Emgcy Mic On	The Hot Microphone feature is active, and the CM5000 is automatically transmitting hands free emergency audio.
Encryption Key Error	The terminal supports SCK Air Interface Encryption but no SCKs are available.
Empty Entry	The speed number you dialled does not exist, or the number exists but the group is non-selectable.

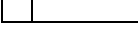



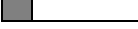

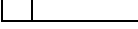


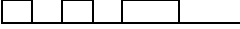

Messages	Message Description
Faulty Unit Error...	Self-test failed. An operational fault has been detected with your CM5000. Record the error number. Turn your CM5000 off and contact service.
Group already exists	The group you are attempting to add already exists in the My Groups folder.
Insufficient Visible Data	Your terminal is in the process of determining your location. This may take several minutes to complete.
Insufficient Visible Satellites	Your terminal is in the process of determining your location. This may take several minutes to complete.
Invalid ID	The entered number is not valid.
Invalid Shortcut position	The entered number is not valid.
Insert SIM	The SIM card authentication is enabled and no SIM card is inserted into the terminal.
Limited Service	Emergency Calls, Emergency Alarms and mobility operations (for example: group attachment) are allowed. All other incoming and outgoing call and data services are blocked.
List Empty	There are no programmed entries in the scrolling list. Type the entry.
List not Attached	All talkgroups in the scan list are not attached.
List Partially Attached	The scan list is active, but not all talkgroups are attached to it.
Message Delivered	Indicates mail successfully delivered.
Message Failed	Indicates mail delivery failure.
 Mode No Service	The CM5000 is outside coverage. Return to coverage.
My Groups is empty	You cannot view/delete groups when the My Groups folder is empty.

Messages	Message Description
My Groups is full	You are not allowed to add a group to the My Groups folder as it already contains the maximum allowed number of groups.
Network Trouble	Network problems. Please try again later.
No Answer	The called party does not answer.
No Entries	This message is displayed when accessing an empty list.
No Group	Attachment failed. CM5000 detached from current talkgroup. Please wait until the CM5000 attaches again to the current talkgroup.
No Group	<ul style="list-style-type: none"> • Displayed when you are out of the normal coverage area of your selected talkgroup. Please select a new talkgroup that is valid for your working location. • Indicates a favourite group was removed from the My Groups folder.
No List	The Network List is empty.
No New or Old Messages	Indicates there are no new or old messages in the Inbox.
No Selected Scan List	You selected an empty Network List (No List).
No Service	The CM5000 is out of coverage.
Not Allowed To Start Call	You are not allowed to dial a number which is not in the Address Book - if set up by your Service Provider.
Not Allowed To Transmit	<p>Release PTT and try again later.</p> <ul style="list-style-type: none"> • You are not allowed to send a text message or a status message to a number which is not in the Address Book - if set up by your Service Provider.
Only One Entry	There is only one programmed entry in the scrolling list.
Overheating	The CM5000 turns off. Keep it turned off for five minutes.












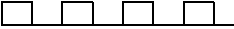

Messages	Message Description
Party Busy	The called CM5000 is busy.
Party Not Available	<ul style="list-style-type: none"> • The called CM5000 is out-of-range. Please try again later. • The called CM5000 is turned off. Please try again later.
Please Try Again	The CM5000 could not place the call.
Please Wait Connecting	A message during startup.
Registration Failure	The CM5000 could not register within the system. Please try again later.
Request Timed Out	Triggered by timer expiring - request was sent out properly but reply was not received while no network error was detected.
Security (K) Error	The SIM card authentication is enabled and the inserted SIM card is supported by the terminal but no authentication keys are available.
Service Denied	Invalid number. Call your Service Provider.
Service Not Available	This service is not available on the current network.
Service Restricted	This service has been restricted by your Service Provider or it has not been purchased.
SIM Not Supported	The SIM card authentication is enabled but the inserted SIM card is not supported by the terminal.
SIM Service Restricted	The SIM card authentication failed due to entering wrong PUK too many times. Contact your Service Provider.
Speaker Volume bars	Use Rotary knob to adjust volume level. (Rotary knob is programmed to "Dual" or "Volume").
Talkgroup ...Added	Group name added to the favourite talkgroup folder.

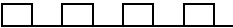










Messages	Message Description
TG ... cannot be deleted	You cannot delete this group from the favourite talkgroup folder. Your Service Provider has set this group to non-deletable.
Try Again Later	The requested service is temporarily unavailable.
Unit Disabled	Check with Service Provider.
Unencrypted	The message appears on any clear call occurrence when the SIM card authentication is enabled but the encryption is turned off.
Unit is OK Warn...	Self-test error. A minor fault has been detected with your CM5000. The CM5000 is still fully operative. Should this error recur, note the error code and contact service.
Unit Not Attached	The CM5000 could not attach to the system. The talkgroup may not be defined in the system. Please try another group.
Wrong Key	The terminal is in a call and is using a key that is not valid. Update the key by pressing Update .

Tones

□ = High Tone; ■ = Low Tone		
Description	Type	Repeated
Idle		
<ul style="list-style-type: none"> • Back to Home display • Back to Rotary volume use when Rotary scroll timer expires • Back to coverage • Back to full service 		Once
Clear to send		Once
• Bad key press		Once
<ul style="list-style-type: none"> • Good key press • CM5000 self-test fails at power up • From out-of-service to in-service 		Once
In Call		
<ul style="list-style-type: none"> • Call clear warning • Call modified 		Once
Call waiting tone while Phone or Private Call are pending		Every 6 seconds, until a call is terminated.
Data Connected or Data Disconnected.		Once
Talk Permit sounds upon pressing the PTT.		Once (Normal Tone)
		Once (Short Tone)
Talk Permit without gateway sounds upon pressing PTT. The tone indicates the gateway is no longer available.		Twice
		Once

□ = High Tone; ■ = Low Tone

Description	Type	Repeated
<ul style="list-style-type: none"> Talk Prohibit System busy Called terminal not available or busy. 		Until you release the PTT
<ul style="list-style-type: none"> Call disconnected or failed due to network Wrong number dialled. 		Once
DMO Entering		Once
DMO Exiting		Once
Phone ring back (sending)		Every three seconds, until the called user answers or call is rejected.
Phone busy		Every 0.5 seconds
Status message sent to the dispatcher.		Once
Status message is not acknowledged by the dispatcher.		Once
Incoming Calls		
Your CM5000 received a Group Call without gateway. (setup only)		Once
High Priority Group Call received		Once
Emergency Alarm sent or received		Twice
Emergency Alarm failed		Four times
Emergency Call received		Once

□ = High Tone; ■ = Low Tone		
Description	Type	Repeated
Phone ring (reception) Duplex Private Call	According to the Ring Style sub-menu setting.	Until you answer or the call is rejected.
Private Call received		Until the call is answered
Private Call ringing to the caller		Until the call is answered
Simplex Private Pre-emptive Priority Call (PPC) ring.		Every 4 seconds until the call is answered or rejected.
Duplex Private PPC ring.		Every 4 seconds until the call is answered or rejected.
Limited Service		Once upon entering limited service
New Mail Received		Once
New Group Call		Once
General		
Volume setting (earpiece, keypad, speaker)		Continuous
Volume setting (Ringer)		While setting the volume
Transmit Inhibit (TXI)		Once
DTMF (0-9, #, *) during the call	DTMF 	Continuous, until the user releases the key

<input type="checkbox"/> = High Tone; <input checked="" type="checkbox"/> = Low Tone		
Description	Type	Repeated
GPS		
GPS in coverage	<input type="checkbox"/> _____	Once
GPS out of coverage	<input checked="" type="checkbox"/> _____	Once

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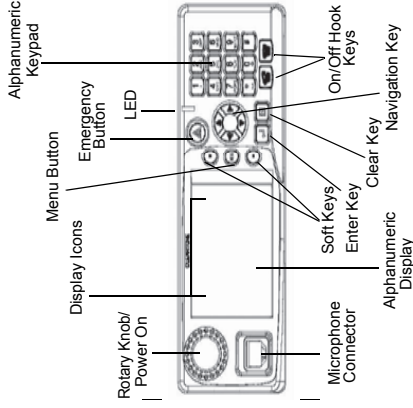
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Cleartone CM5000 Quick Reference Guide



Using the CM5000 Menu System

- To enter the menu, press the **Menu** button.
- To scroll through the menu, press or .
- To select a menu item, press **Select** soft key or .
- To return to previous level, press **Back** or .

Selecting Trunked/Direct/Gateway/Repeater Mode Operation

- Switching to Gateway or Repeater modes is possible in TMO only
- From the Home display press **Optns**, select **Trunked Mode/Direct Mode/Gateway Mode/Repeater Mode**.

Making a TMO Group Call

From the Home display navigate to the desired group. Press **Select** soft key (if configured). Press and hold **PTT**. Wait for the talk permit tone (if configured) and talk. Release **PTT** to listen.

Making a DMO Group Call

Enter DMO. Navigate to the desired group. Press **Select** soft key (if configured). Press and hold **PTT**.

Wait for the talk permit tone (if configured) and talk. Release **PTT** to listen.

Making an Emergency Group Call

Press and hold the Emergency button. Press and hold **PTT**. Wait for the talk permit tone (if configured) and talk. Release **PTT** to listen. If using "Hot Mic" feature, wait for the **Emergency Mic On** message to appear on the display and talk without pressing **PTT**.

To exit Emergency Mode, press and hold **Exit** soft key.


Making a Private Call

From the Home display select Private mode using or . Dial a number. Press and release **PTT**. Ringing sounds. Called party answers. Wait for the called party to finish speaking. Press and hold **PTT**. Wait for the talk permit tone (if configured) and talk. Release **PTT** to listen. Press to terminate call.

Turning the CM5000 On/Off

To power the CM5000 on/off, press and hold the **Knob**.

Answering a Call

Your CM5000 switches to the incoming call and alerts you of the incoming call. To answer the call, press **PTT** to answer the call. To reject or end the call press .

Sending a Status Message

Select the desired group, then press the **Menu** button and select **Messages > Send Status**. Select status and press **Send**.

Sending a New Message

Press the **Menu** button and select **Messages > New Message**. Write your message. Select **Send**. Select your mail recipient or enter number. Select **Send**, or press **PTT** to send the new message.

Tips & Tricks

- **Backlight Control**
You can either disable backlight (covered operation) or have it automatically turned on, by any key press.
- **Menu Shortcuts**
You can easily access any menu item, by pressing the **Menu** button and a numeric key. (No delay

between the **Menu** button and the key!)

You can ask your Service Provider to program menu shortcuts.


You may also define a new shortcut: enter the menu item, press and hold the **Menu** button, and follow the instructions in the display.

- **Group Audio Control**
You can control audio level for any Private or Group Call. However, you can define via the menu to have all Group calls always loud (**Menu** button > **Setup > Group Audio**).
- **Unified Contact List**
You can keep several numbers (Private, Mobile, Home, Work, PABX, Other) for the same person under the same contact name.

- **Text Size**

You can see the text on the display in two sizes: **Normal** or **Zoomed** (**Menu** button > **Setup > Display > Text Size**).

- **"My Groups" Folder**
You can select any group (TMO or DMO) and add it to your personal folder.

In the Home display, press  to quickly access your "My Groups" folder.

- **PIN Protect**
To protect access to network operation, from the main menu, select **Security > PIN Protect**.